

The NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO
THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

VOLUME IX

FEBRUARY, 1932

NUMBER 2

Exercising Creative Leadership— The School Head's Job

*To rise on the stepping stones of past efforts to higher
levels of achievement should be the aim of the principal
who wishes to ensure continuous growth for his school*

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CONFORMITY, conservatism and close-mindedness are the besetting sins of all who in the fierce competition of life win their way to positions of authority and power.

When an individual has adopted a policy, has followed persistently his chosen course of action, has made a success of it, and has been rewarded for his success by promotion to a position of leadership, it is apparently too much to ask of human nature that he should then be ready in the height of his success to consider a different policy and to evaluate it as better than his own, thereby admitting his past judgments erroneous and his apparent success a delusion.

Only the man with supreme confidence in his ability to make good a second time dare give up his assured authority, dare declare himself a novice and dare start to learn from new beginnings. That you "can't teach an old dog new tricks" is proverbial. Yet there is no more certain symptom of real courage and leadership than this very willingness to evaluate the new open-mindedly and to abandon the old at whatever cost when the new proves to be better than the old.

Moreover, most principals are so busy with the routine of administration that it is only the exceptional one who refuses to be swamped by detail

and so becomes a leader. Most of us never stand off and see our jobs as a whole. Our practices and our philosophies resemble crazy quilts, made up of many small pieces of inharmonious fabrics and colors, held together by forcible interlacings around the borders of each area. Few of us are consistent in our philosophy. Fewer still are courageous enough, having recognized a new value, to attempt to apply it systematically and uniformly throughout the whole of life. But leaders excel others in courage. Let us, therefore, briefly survey the work a principal has to do, taking note of the many different types of influences that condition his work, the many different personalities with which he must work and the many different activities he must direct, that we may realize the Herculean task a principal sets himself when he deliberately undertakes to bring about progress in education.

Society, through the board of education and its executive officer, the superintendent, gives a principal his commission, homes supply him with children, colleges with teachers. The community constructs a building, equips it, provides supplies and textbooks. The local, state and national governments pass laws defining his powers and duties. Various civic and professional agencies impinge

upon him in many ways. The entire situation and all the elements with which he must work are already in existence before he receives his commission. He cannot change them, even if he would. Each of them makes certain demands upon him, each involves adjustments and management on his part. The entire left half of Diagram 1 represents the static or passive objective aspects that condition a principal's work.

The principal, as one element in a school organization, is a free agent only to the degree that responsibility is delegated to him by the superintendent. That is, the responsible principal receives executive authority over a limited area, and for specific purposes, under the general educational policy adopted for the system. Even within these limits, however, there is ample room for the exercise of creative talent.

Within the educational framework in which he finds himself, the principal's professional job is to weld the separate elements into a working organization. He has to make assignments of teachers and children to rooms, to see that they are supplied with tools and materials and that goals and methods and times are defined. He must not only set the task but must inspire all to effort and must then inspect the results of effort to make sure his inspiration is effective. Inevitably in so complex a situation mistakes are made, difficulties

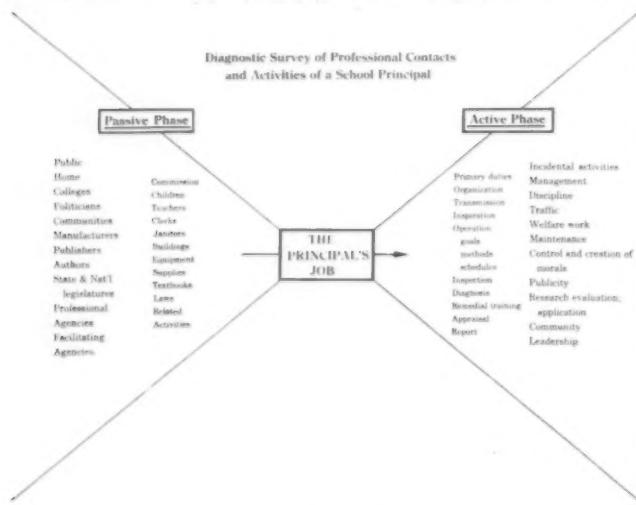


Diagram 1.

arise, complications occur. These must be diagnosed and remedial measures taken. Finally, tests must be given, appraisal made and reports formulated and sent to proper authorities.

In addition to these specific duties, there are many noneducational activities that are as essential as instruction. Children must be taken to school safely and delivered home again when sessions are over. Teachers, equipment and supplies must be maintained at an efficiency level. The spirit of the whole school as a living going con-

cern must be maintained, offenders disciplined and reformed, sick children looked after, poor children clothed and fed, vicious and defective children detected and provided for.

Even the building requires care. Broken windows must be replaced, janitorial services inspected and maintained at high efficiency and recreation on the playground supervised. Cost must be kept down and efficiency kept up. Use must be made of all coordinating agencies—libraries, attendance officers, research bureaus, boards of health, policemen, firemen, building inspectors, workmen and employees of all kinds, civic organizations, agents, parental organizations, ministers, churches, lodges, a list seemingly without end. The school as a whole must respond rapidly and effectively to every demand, professional or nonprofessional, from within or without the system.

Dangers That Face the Principal

Inevitably the principal is a busy man, swamped with routine and detail, a man of decision, force, determination, a driver, an assurer of responsibility, a doer, a man of achievement. The danger is that he may be only these; that he may become an impatient dogmatic autocratic man of power, a hard irascible, conceited, unsympathetic specialist, a pessimistic cynical despot, an obstructor of progress, ruling by force and fear. Many a fine character has been ruined by the magnitude and multiplicity of the demands made upon him as the central authority in a school's organic life. It is equally true that many a mediocre person has been stimulated to growth and glorified in character as a result of his conscientious efforts to meet the demands made upon him as a principal.

It is easy to be pessimistic about principals and a principal's job. Many principals, it is true, are woeful failures, but many more strenuously and conscientiously do their best. When the full tale is told of the rise of American education, no small share of credit will be given to those who not only have achieved success in their work but have exercised creative leadership as well. The purpose of this article is not to censure but to inspire, to stimulate many to develop powers of leadership through an understanding of the dangers and opportunities by which they are surrounded.

Imagine now a successful principal, larger than his job, master of it and glorying in his mastery and in his perfect adjustment to all elements and conditions. Imagine further a situation that demands from such a principal the evaluation of a philosophy of education or a method of teaching different from his own. Suppose the situation dynamic enough to force the principal to think of

the consequences of any change in his own basic philosophy, of all the readjustments and difficulties and problems that change would entail in the situation pictured in Diagram 1. Is it any wonder that the average principal is pessimistic about the possibilities or the desirabilities of change? Yet only the man with faith and courage, not only to face the consequences of change and reorganization but to plan aggressively for them, is really a leader.

Exceptional indeed is the principal in whose school a new teacher dare try an intelligent experiment along progressive lines contrary to the approved procedure. As a whole, the educational world moves forward only as those in power die off and as their places are taken by those with somewhat different training. When the books of life are opened on the great judgment day, the years of success of many a principal will be obliterated and his account plunged deeply in the red by his deliberate use of power to destroy in young teachers the beginnings of creative self-expression, a budding faith in progressive movements and a sincere belief in the feasibility and desirability of improvement. The older the country the more stable its society and the more difficult change is to bring about. The time comes when only a revolution, as in Russia, may dislodge the death grip of authority and power on progress. The principal who wills to act as a leader in evaluation and change alone may make such revolutions unnecessary.

The truth of the matter is that we live in two worlds simultaneously and yet seldom realize it. One is the world of achieved values. It consists of objects, patterns, organizations, which have become outward symbols of past choices of value, choices made so long ago and so consistently that the choice is no longer questioned or even perceived to have been a choice. This materialistic world of achieved values is the static deterministic world known to science where effect follows cause endlessly in fixed order. It is into this world that we are all born, the "natural" world which the natural man perceives spontaneously by virtue of his inheritance of standards of value "objectified" by choices made in the unrecallable past.

Meeting the Demands of Progress

The other world, the spiritual world, a "future" world, is a world of feeling, ideas, concepts, which are the basis for more complex choices. It is a world of emotions, desires, values in process of organization. It is an imaginative world, a world of change, a world of progress.

Every perception of a new spiritual value potentially makes possible further perception of higher

spiritual values. There was a time when the airplane was but an idea in the minds of the Wright brothers; to-day it is an objective reality which is operating to reveal to men in new ways their interdependence, their community of interests, their essential brotherhood. The normal course of evolution in value is: (1) perception of a new spiritual value, (2) struggles to achieve the value, (3) success, (4) development of new institutions or organizations that perpetuate the success and

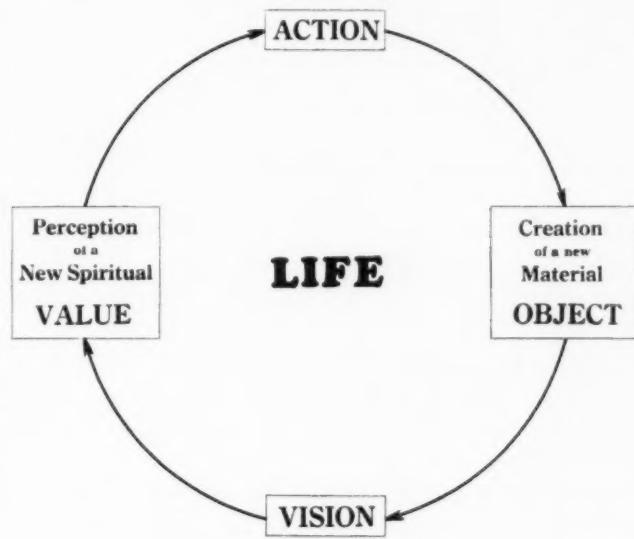


Diagram 2.

provide further opportunities for the perception of new values (Diagram 2).

When slavery was regarded as a divine institution provided by a wise deity for the protection and care of immature races, one could own slaves in peace and comfort and even take pride in doing God's will well. But when disturbing visionaries began to open the eyes of the nation to the fact that slaves were human beings with feelings, aspirations and personalities exactly like our own, the situation changed. To be sure the first abolitionists were regarded as public enemies and were put to death. But eventually so many people came to adopt "freedom" as a desirable value that they were strong enough to force those who clung to the old values to abandon slavery as an institution.

To-day slavery is a dead issue. The battle for change in values rages about "property rights," "war," "birth control," "sex relationships" and similar questions. And always, progress in social life comes as a result of the vision, the courage, the efforts of the exceptional man who by his sacrifices gives objective reality to those hopes and aspirations which lesser souls "see" but dare not act upon.

Many a principal will ask, "But how is it humanly possible for one individual to meet all the demands shown in Diagram 1 and still have time

and energy for constructive thought and leadership?" The answer is of course that since some men do it there is a way, but this way, as is so often the case, involves a change of values.

The overburdened principal is an individual who values achievement above growth, who believes the old saying, "If you want a thing well done you must do it yourself." Much like the center of a spider's web, the office of such a principal is the center of the life of the school. All else are automatons, slaves doing his will. Only one mind thinks, acts. All others dare not, for punishment, swift, sure and severe, follows every mistake.

A different philosophy of administration conceives the life of the school as a cooperative enterprise whose purpose is growth, not achievement. In a school dominated by such a philosophy, the principal's task is leadership, planning, not action. Collectively, the policy of the school is defined by principal, teacher and children, in terms of the average vision. Rules and precedents are established, responsibility and authority delegated and the load carried equally by all. Creative responsibility is awarded to every man according to his ability, the principal serving merely as the chief coordinating guiding agent. Control and discipline are exercised but only in terms of the power inherent in truth, never by the imposition of one will on another. Experimentation and appraisal are the universal rule. There is constant inventive and creative effort, constant reformulation of policies and goals, constant appraisal of success, and the entire school moves forward on the basis of continuous generalization from experience instead of upon the dictates of the principal's will.

A Progressive Program

The principal budgets his time and religiously devotes a set part of his day to the consideration of problems and to their solution. He keeps his colleagues informed as to where he stands on each question and why, and encourages them to do the same. Each discoverer of a new truth becomes for the time being the teacher of all the rest, the principal conceiving his functions to be solely those of stimulation, suggestion, collection, transmission, organization and report.

The program, then, of the principal as an educational leader working for progress should be:

1. To collect from all possible sources as many alternative philosophies of life and of education as he can.

2. To evaluate these and select or devise a basic philosophy as a guide for his own activities, a philosophy having for its aim the remedy of existing recognized defects and the improvement of the existing order.

3. To take action in terms of this philosophy and to inspire others to cooperate in the achievement of the desired goals.

4. To compare the effects of action with the desired effects in order to reveal defects.

5. By invention, by scientific experimentation and by every means in his power to search for facts, truths and principles that may be used to remedy such defects.

6. Continually to modify practice in the light of the results of such search and experimentation and to modify the basic philosophy as the discovery of new truths and new means of control make such modifications possible.

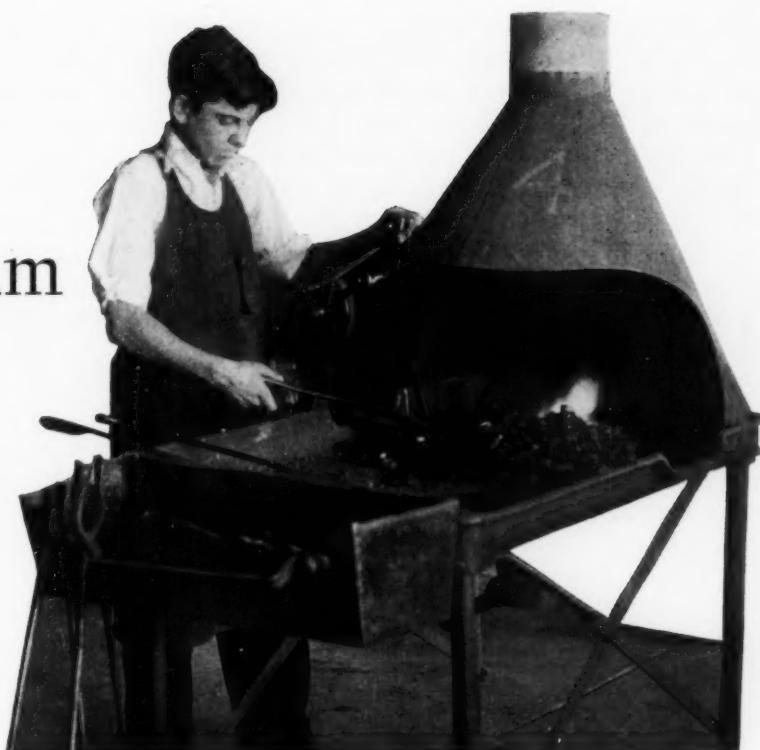
7. To present systematically to others both the chosen philosophy and the reasons for the choice with a view to inducing them either to adopt the same philosophy and cooperate in the achievement of its goals or to expose its fallacies and defects and bring about its improvement.

The Ideal Principal

Translated into terms of human character, the principal as leader in bringing about progress must have poise, balance, and a sense of proportion and of humor. He must take himself and his job seriously enough, but not too seriously. He must believe in the potentialities of others and be willing both to wait for their development and to learn from them. Patience, faith and courage must be his three outstanding characteristics. He must protect those who try and fail and reward with adequate recognition those who succeed. He must think improvement, talk improvement, desire improvement, create improvement and stimulate creative contributions in others. Only such an individual is competent to serve as an educational leader of others.

Is the ideal sketched attainable? Experience answers "yes." The philosophy of freedom and growth in education has spread from the classroom to the principal's office and is even modifying the work of supervisors, of research agents and of superintendents and boards of education. As nearly as one can judge, a new era is dawning for American education. The concept of the responsible principal makes demands that cannot be met under the old philosophy of autocratic power. Individualization and creative teaching have come to stay. Creative supervision and creative administration are sure to follow, slowly perhaps but inevitably, because they are expressions of new and higher fundamental values. In the new era every principal will be a leader in evaluation and application of progressive trends because only leaders will be qualified to hold positions of such great opportunity and responsibility.

How the Guidance Program Functions in a Small School System



Vocational guidance as it has been developed in the schools of Richmond, Ind., provides an effective method of helping pupils to choose and prepare for their life work

By WILLIAM G. BATE, Superintendent of Schools, Richmond, Ind.

MOST school principals and superintendents will agree that some organized effort should be made to provide vocational guidance for the junior high school pupils. At the same time setting up a working program seems to present so many difficulties for the small school system that often the idea is abandoned as impossible. The small system, lacking trained experts in the field, frequently feels that anything it may do will be ineffective, and therefore this phase of the junior high school program is left to such incidental and informal effort as may be put forth by the principal or the occasional interested teacher.

It is true that the services of trained workers and the comprehensive program of counseling and placement service possible in the school system in cities of 100,000 or more are impossible in small systems. At the same time the small school pupil needs vocational guidance just as much as the pupil in the large city. With the hope of encouraging some of the smaller systems that are considering the problem, an attempt is made here to describe the system used in the junior high schools of Richmond, Ind.

Our program is based on the principles of voca-

tional guidance formulated by the National Vocational Guidance Association. We feel that vocational guidance is an important part of the general program of guidance that must be maintained by any junior high school really functioning in the lives of its pupils. Vocational guidance that functions properly is the process of orienting the pupil towards the problem of a vocational career and of aiding him to make a correct choice. It must be remembered that in an American school in the final analysis most of these young people will insist upon making their own choices and determining for themselves what they will do in the world. The job is to help them acquire such information and afford them such guidance as will aid them in making better choices.

The junior high school activities that are included in the specific program for vocational guidance are as follows: the home room and the adviser; specific curricular experiences having guidance character; experiences in extra-curricular activities; a course in vocational information and occupational opportunities; the school counselor; a system of adequate vital data about pupils; a system of citizen counselors; the vocational director.

If vocational guidance is an integral part of the general work of guidance in the school it must necessarily claim some of the attention of the home room adviser. Upon entering the junior high school each pupil is assigned to an adviser with whom he remains during the three-year period. The group to which he is assigned is known as the home room or the advisory group and includes about thirty pupils. The pupil is directly responsible to the teacher in charge of his group in most of his school relationships and as a consequence there grows up the intimate acquaintanceship with the pupil that only an adviser can have.

The home room teacher is not expected to be an expert in vocational guidance. At the same time this adviser must think of his advisees in terms of their futures and he is naturally called upon in the course of advisory contacts with the pupil to make suggestions relating to the pupil's vocational future. In this connection the adviser has two important and distinct functions. First, he is expected to cooperate with the guidance teacher and to supply data needed in actual vocational counseling, as described later in this discussion. Second, the adviser will discern the need for special counseling and guidance and will refer the case to persons assigned for such work. For example, the adviser is likely to be one of the first to know when a boy or girl is planning to leave school. Likewise, the pupil who is thinking about his vocational future may possibly reveal this fact to the adviser.

It might be said, and it is indeed claimed by some teachers, that all regular curricular or classroom work is vocational guidance. We do not believe that this is true. It is not safe to assume that any guidance values in the regular classroom work will naturally find their way out for the profit of the pupils. It is true that many if not all of the studies in junior high school should have some vocational guidance qualities but these need to be sought for and made definitely available.

Planning the Junior High Program

The purpose of the junior high school program of studies is twofold. The curricular experience in this school should provide training that is on the one hand fundamental and that on the other hand offers experiences that are exploratory and revealing and that to a certain extent test the pupil's response to varying fields of life activity.

In including these phases of the regular curricular work as a part of the vocational guidance program the subject teacher, the adviser and the guidance teacher must all be aware of the specific opportunities of such experiences, and the subject teacher must arrange for them to be presented in

the course of the work. The following are some illustrations of what is meant by definite exploratory and tryout features in regular studies, pursued by every pupil at some time during the period he is in junior high school.

The course in general science may open up for the pupil the realm of science and particularly the fields of scientific work in which there is vocational opportunity. Success in the work, signs of aptitude or the opposite and interest in further inquiry about work in science are some of the leads that may be definitely planned by the subject teacher and that may win responses from the pupil that should be reported to those entrusted with his guidance and counseling.

Industry—The Pupils' Future Field

The majority of our pupils in junior high school must find their vocational opportunities in the field of industry. The required courses in practical arts reveal to the pupils various industrial fields and test their ability to develop the attitude of a good worker, to develop skill in manual work, to try out to some extent their ability in the various fields of metal and woodwork, and to teach respect for quality in workmanship, no matter what the field may be.

Business courses in the junior high school provide an opportunity for fundamental training that will be of practical use to any person and at the same time will reveal those pupils who have aptitude for office and sales work and similar occupations.

In the so-called regular or fundamental and integrating subjects, such as mathematics, English and the social studies, there are to be found an almost endless number of opportunities for guidance of the pupil through development of specific vocational interests or the testing of aptitude and ability in certain vocational fields. Through mathematics, for example, may come the opportunity to learn about engineering. English offers the opportunity to try out certain fundamental requirements for specific occupations. For example, the degree of success in spelling, writing, grammar, vocabulary and other subjects may reveal much for the girl who thinks of taking up stenography or newspaper work.

It is important for every teacher to know what specific values his subject has in terms of vocational uses and then to see that those phases of the work are actually made to function.

A wide range of extra-curricular activities so arranged that every pupil may participate in at least one is provided within the regular program of the school. These activities range from the more highly organized talent groups to the hobby club.

If vocational guidance is most effective when it is administered on the basis of informal and widely distributed influences and if the best voluntary choice of a career is based on complete orientation of the pupil, then the wide range of interests and activities possible of development in the extra-curricular program is of no mean importance. In the hobby club, in the crafts activity, in the fine arts endeavor, in the experience of home room club organization and operation, in the opportunities for development of leadership in all the varied phases of extra-curricular work, are gained the experiences that may influence and determine the final successful placement of the boy or girl.

The probabilities are that this phase of the school program has not been overdeveloped. There is need of a keener recognition of the fact that in these activities boys and girls may grow and give evidence of their abilities. The home room teacher, adviser or counselor may well examine the record of the pupil's experience in these things to find the key facts that will point the way for suggestions, advice and guidance.

The course in vocational information and occupational opportunities is organized as a full five periods a week class during the 9A or last semester of the junior high school. It is one of the units required of all pupils.

The objectives of this course are to focus the thinking of the pupil on the problem of his occupational future and to orient him at this particular point in his school career. Pupils in the 9A grade



are soon to enter senior high school or to drop out of school and begin their occupational experiences.

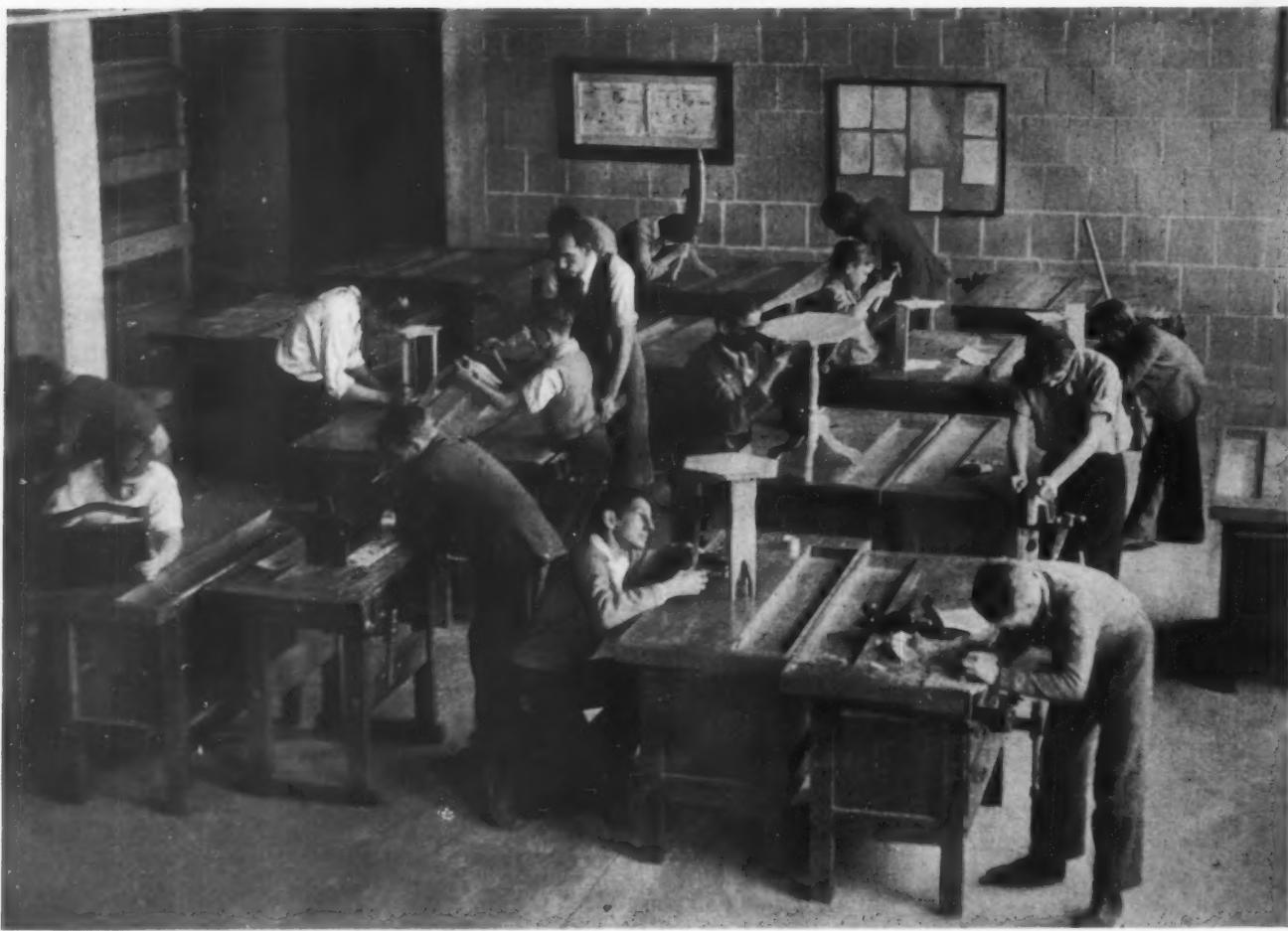
The organization of the course is such as to make use of the pupil's general interest in the problem facing him and at the same time to encourage any special interest he may have shown or that may appear during the semester. To this end the course opens with a study of the general situation facing every American boy and girl and the common qualities demanded by the world of work at large. Very early in the course attention is directed to a

study of occupational fields by laying out a plan for investigation and collection of facts. A report is made on vocational opportunities in which the members of the class are interested.

As far as possible the work is organized on a laboratory and project basis, the course making use of available materials pertinent to the problems under discussion. Much use is made of the notebook, the scrapbook, the excursion, the personal investigation and report and the group counseling by men and women of the community representing different fields. In this course there is a maximum of ac-

tivity by the pupil. While linked at every point possible with the real life situation of the pupil the course serves through informational study to introduce the boy and girl to the world of work, its characteristics and opportunities.

The outline of the course includes the following divisions: reasons for the course; plan for the conduct of the course; common qualities that are required for success; review of the world's work; biographies of men and women in various fields; special studies of occupations; women in the field of industry; opportunities in senior high school.



These two views of the shops of the junior high school, Richmond, Ind., give some idea of the many types of vocational training provided. A woodworking class is pictured above, while the lower picture shows pupils engaged in various types of metal work.



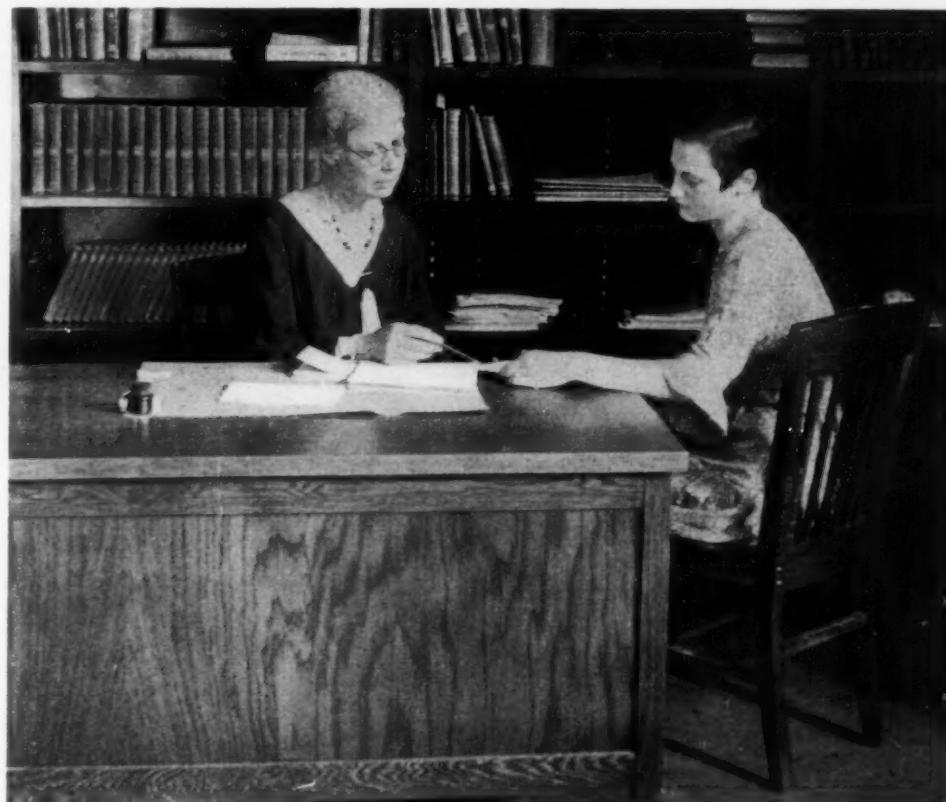
The course is an integral part of the whole program of guidance, and coming in the last half of the ninth grade it not only provides information, orienting the pupil toward his problem, but provides for the discovery of the need for counseling and further guidance. The spirit of the course may be summed up in the terms orientation, information, counseling and stimulation of a life interest in the future.

In each junior high school one of the teachers handling the course in vocational information is designated as the counselor for that school. The program of work has been so arranged in each

school when sixteen years old but who are still a year or more from that point; (b) all 9A pupils—pupils below 9A who are reported by advisers or other teachers as planning to leave school soon or who are in special need of counseling.

The pupils in the first group are called for a short conference, known as the initial or acquaintance conference. In this conference the counselor seeks to become acquainted with the pupil, to secure some preliminary data and to let the pupil become aware that a friendly interest is being taken in him. A careful record of each case is kept by the counselor and further conferences and the guid-

Planning for the future. This interview or counseling conference between pupil and counselor will have an important influence on the girl's choice of a career.



school that the counselor has at least one full hour per day during the regular school program for pupil conferences. In classroom work the counselor has contact with the 9A pupils through the course in vocational information. This plan is expected to increase the amount of time given for the purpose of conferences.

The purpose of the counselor's work is of course to render a more specific and effective guidance service to the individual pupil. Since the amount of time is limited some plan of work has been necessary. During the present year the program of counseling has been planned as follows:

The pupils to be handled in conferences have been divided into two groups, (a) all 9B pupils, that is, pupils below the ninth grade who are reported by their advisers as planning to leave

ance of any pupil are based on the data secured and the needs revealed.

The pupils in the second group are those for whom it is felt that more extended counseling is needed. In each case in this group the counselor attempts to carry the work to the point of knowing that the pupil has some plan regarding school and a vocational career. Here again, as many conferences and as much counseling are given as the individual case seems to need. In the cases of 9A pupils the conference and counseling work are naturally linked with the work of the course in vocation information.

The aim of this plan is to allow no pupil to pass out of the junior high school without specific attention having been given to his case, with the result that he has some plan for the future that is based



as far as possible on his needs and on his abilities.

There is perhaps no more helpful or important aid to both the home room adviser and the counselor than adequate and accurate records of the pupil. At the same time there is perhaps no more important help to future advisers than the proper recording of informative data by the adviser and counselor in the junior high school.

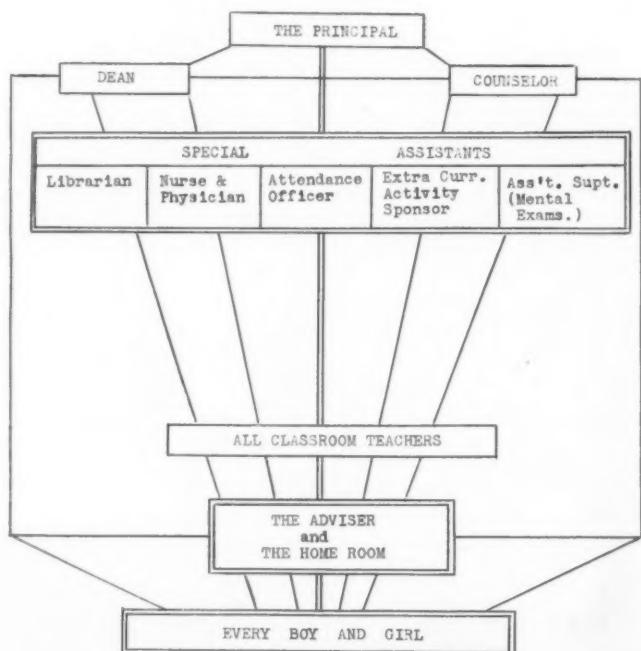
The counselor of course keeps her own records of cases. The regular school records are used, however, to secure the essential data referring to previous school experiences and to the personal and social background of the case.

How Pupils' Records Are Kept

The system consists of a master record on file in the school office and a home room adviser's record card which accompanies the master record whenever the child is transferred. The comprehensive master record includes not only the usual personal data and the school marks but much data gathered from the time the child starts in school, concerning his social and family background, his personal qualities, interests, aptitudes and social qualities. These data are gathered gradually by the advisers and are recorded on the master cumulative record in summary form. The data on the adviser's record card are in somewhat more extended form.

The essential data gathered by the adviser and

Classes in general science, like the one pictured above, may open up for the pupils the realms of science and particularly the fields of scientific work in which there is vocational opportunity. A chart outlining the guidance program used in the Richmond schools is shown in the lower illustration.



counselor in junior high school are also entered on this card, which is sent to the senior high school when the pupil is promoted. For each pupil so promoted there appears on the master record the counselor's summary, intended to be helpful to advisers in the future. In addition to this the counselor plans to send to the proper persons in the senior high school any additional information that will offer a helpful lead in giving further guidance.

Utilizing Outside Help in Guidance

In this business of vocational guidance we find of value the assistance of men and women in various occupational fields, provided we tell them what we want and organize the effort so that it actually fits the need of boys and girls of junior high school age. We have been fortunate in securing a splendid response from the men and women in our community who are in a position to give authoritative advice to the boys and girls.

Each school has a list of men and women who are known as citizen counselors. These people were listed through the aid of the four service clubs of the city, Rotary, Kiwanis, Lions and Altrusa. In addition some members of the Foreman's Club are on the list. The list is divided into three groups.

One group consists of those who are available for talks to classes as a whole. It is planned each semester to use four or five from this group who are invited to talk to the class as a whole on some topic relating either to the field they represent or to vocational life in general. In this group are listed men and women who because of their position in the industrial or business life of the city command universal respect and at the same time have the ability to speak in an interesting manner.

The second group is available for talks or conferences with smaller groups of boys or girls who may be interested in gaining information about a particular vocational field. For example, a man who has a background of aviation experience and is the head of a firm manufacturing aircraft is available to talk with a group of ten or twelve boys who are developing an interest in this field and who wish to know more about it. Likewise, a woman who is an office manager is available to talk with groups of girls who are interested in knowing about the stenographic field.

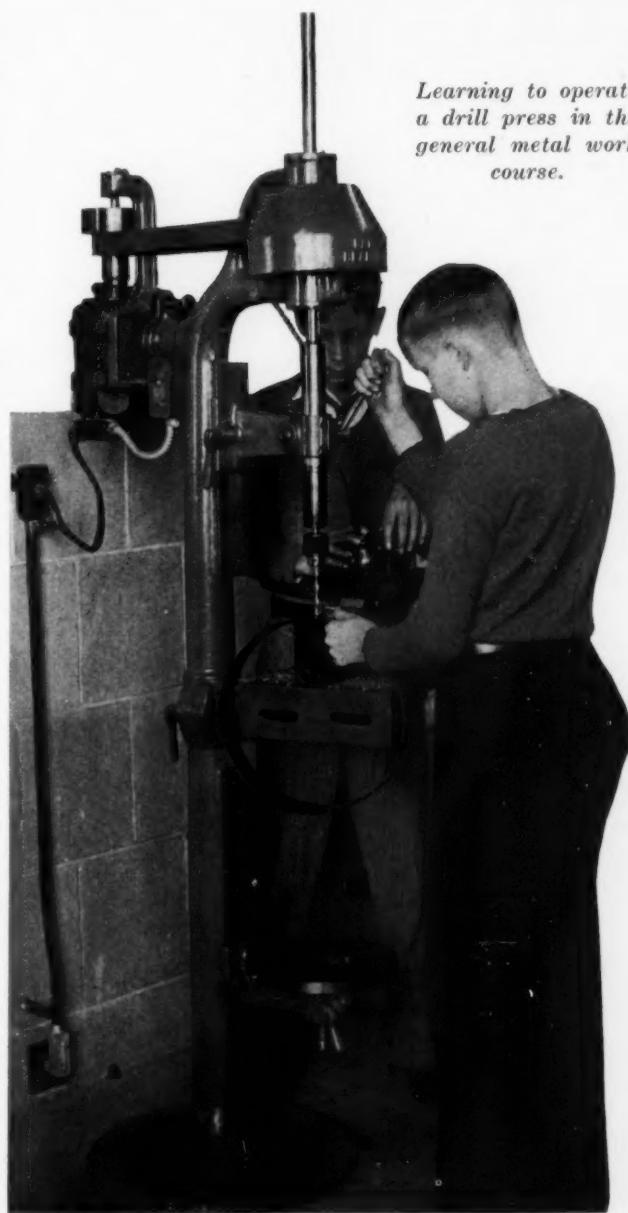
The third group is available for counseling conferences with individual boys or girls. Either the teacher of the course in vocational information or the counselor may arrange conferences with these men and women for individual boys and girls. Their advice is sought when the individual pupil is gathering data for an occupational report in the field of his particular interest or when the coun-

selor feels that a boy or girl who is being guided needs such a conference.

Outlines of the ground to be covered in both talks and conferences have been worked out and supplied to the citizen counselors. These outlines help them and at the same time aid in supplying the pupil with the type of information or counsel most needed. Over fifty men and women are on the list of citizen counselors, representing practically every important vocational field in the community.

Acting as an advisory and coordinating officer, the vocational director of the school system works in close cooperation with the counselors and guidance teachers. He assists in the contacts with industry and business, helps in arranging excursions and does much special counseling in cases referred to him. His office has charge of issuing both age certificates and working certificates

Learning to operate a drill press in the general metal work course.



required by the state law. The counselor plans to keep the director advised regarding pupils planning to seek these certificates, and when the report has not been received on pupils so applying the decision in the case is held until the report is received from the counselor.

The general plan and the mechanism of the program for vocational guidance at present in operation in the three junior high schools of Richmond, Ind., have been outlined. Two of these schools enroll approximately five hundred pupils each, while the third is a smaller unit with approximately two hundred and fifty pupils. In this brief outline of the program and the work it has not been possible to include the methods used, or to describe in detail how the class work and counseling are actually conducted. Neither has it been possible to discuss the manner in which this program is correlated with the general and informal guidance efforts of many people who come in contact with the pupil, frequently influencing him in a decided manner.

This program of guidance has been built up in the junior high schools during the past six years by the cooperation and effort of the principals and the guidance teachers. It represents what can be done in a small system if the problem is attacked with the determination to establish the work. In the beginning the teachers selected for the guidance work, which meant the course in vocational information, were practically without special training but they had the important quality of being interested in the possibilities of the plan.

New York's Schools as Centers of Community Interest

The New York public schools, according to investigators of the Russell Sage Foundation, are outstripping the proverbial little red schoolhouse as centers for community interest and recreational opportunity. An extended study of the use of school buildings in New York for leisure time pursuits reveals that a total attendance of 5,500,000 was recorded in a single year.

Clarence Arthur Perry, who conducted the survey for the foundation, describes schools so used as "in reality indoor playgrounds with the difference that their patrons are young people and adults rather than children." He points out that the traditional policy of regarding outside functions as something sometimes to be endured but never to be encouraged has altered to an attitude of welcome, with recognition of similarity in purpose. As examples of the ever varied groups which

take advantage of school facilities in the congested areas of New York he cites Boy Scouts, Camp Fire Girls, an oratorio society, an upholsterers' union, an Elks' band, a Greek and American Progressive Society, a folk dance society, a people's chorus, a Polish educational council, a bridge club, a training school for nurses, a peoples' institute.

The New York school system, Mr. Perry adds, does much more than serve as host in this work. "The clerks of a bank form a basket ball club in one of their offices, but their games are played in a school gymnasium. Since they have no place to play either at their place of business or near their homes, it is the prospect of being able to use the school gymnasium that leads them to organize the club. The hospitality of the school system thus, in a sense, creates the group as well as affords its members the privilege of enjoying a wholesome pastime which otherwise would be unavailable."

The schools of New York used for community purposes are of three kinds: the official centers, which are administered by a regular staff of trained workers consisting sometimes of a principal, three teachers of health education, one librarian, and one club director; unofficial centers, being schools used by outside organizations running off their own programs under permits covering a series of regular recurring dates; other schools available for the special occasions of local clubs and associations. Aside from the regular programs of the official centers it is reported that the schools of New York were hosts to no less than 30,395 occasions of a social nature in the single year under study.

Most of the later school buildings in New York are constructed with such community service directly in mind. They include gymnasiums, a swimming pool, a library, rooms for club meetings, an auditorium for plays and sometimes a play roof.

Training School Band Musicians by Radio in Michigan

More than 3,800 boys and girls received training in the use of band instruments through following instructions given by Joseph E. Maddy, professor of music, University of Michigan, according to the *Michigan Education Journal*. Professor Maddy reported that after the second lesson, pupils learned to play as many as fifteen different well known songs. Printed instructions to use in connection with the reception of the radio lessons were distributed to rural schools and other groups that had access to radios.

Can We Save in Education Without Harming the Schools?

Whatever schemes may be devised to cut the educational budget, the school term must not be shortened; such a step would nullify all the good work of many years past

By the late Prof. M. V. O'SHEA

ONE thing is certain—most American communities will cut their educational budgets this spring. Every day reports are published to the effect that the salaries of teachers have been reduced, or allowance for educational equipment has been withdrawn, or medical inspection of schools will be abandoned, or the supervisory staff in city and county schools will be greatly curtailed, or the school year will be shortened. In some communities all these plans for securing educational economy are either being considered or have been approved and will be put into effect as speedily as possible.

Why Not Less Expensive Buildings?

Report comes from Philadelphia that there has been ordered a 10 per cent cut in the salaries of everyone connected in any way with the educational system. Much as this action must be regretted, it must be acknowledged that there is a certain logical justification in the reduction of salaries. Living expenses have been reduced at least 10 per cent during the past two years. Well, then, teachers will be just as well off next year, if their salaries are cut 10 per cent, as they were last year or the year before. Unfortunately, salaries were not generous in good times and teachers really ought not to be made to suffer in hard times. But it is impossible to convince the layman of the soundness of this argument. There are probably few communities in this country in which plans to curtail teachers' salaries either have not already been put into effect or are not under consideration, with the probability of their being carried through before the present school year is out. There is no stopping the determination of taxpayers to slash salaries to correspond with decreasing costs of living.

The demand that is being made everywhere for the curtailment of expenses for school building and equipment has a certain logical justification.

Everyone is aware of the fact that we have been spending funds generously for the extension of educational plants. School buildings costing one million dollars each have been going up at a rapid rate in all sections of the country. We could probably get along with somewhat less expensive physical plants without injuring education. If we could afford to keep on with the building program we have been following the past decade or more, it would be a glorious thing for American education because these magnificent buildings we have been erecting have probably been exerting a good influence in the communities in which they are located because they have been impressing all observers with the supreme importance of education in America. The interiors of these buildings have been made as gorgeous as the exteriors. If we had funds so that we could keep on as we have been going it would be gratifying. But if we must economize we can, probably without injury to our educational work, build more modestly and less pretentiously and grandly than we have been doing.

The Cry of the Layman

Laymen who are feeling the burden of taxes are crying out for a pruning of courses of study, alike in elementary and in high schools. They are saying, "Cut out the fads and frills. Teach our children the essentials. Get rid of the merely ornamental and useless subjects that overenthusiastic administrators have been grafting upon the curricula of our schools. Cut off supernumerary teachers who are decorative but not very useful in our educational work." All right, let us reappraise every detail of the curriculum in both the elementary and the high school. Let those who demand that fads and frills be deleted from the curriculum mention the fads and the frills. Shall we cut off domestic science, manual activities, social sciences, hygiene, history, English literature, music, and

put all our emphasis on arithmetic, grammar, reading, spelling and handwriting? There can be no possible objection to going all over our educational work again in the effort to detect waste in teaching topics that do not make boys and girls better and happier citizens and more effective in adjusting themselves to the world around them.

Eliminating the Nonessentials

What the typical layman has in mind when he refers to essentials is the mere formal elements in education. It has taken us four or five decades to recover from the older doctrine that there is some special virtue in disciplining a pupil on formal materials that have no direct bearing upon any phase of the social or physical world to which he must adjust himself. But let us go over the whole ground again and see what really are the essentials of education in present day American life, and let us use the ax on everything in the curriculum that can be shown to be relatively useless for American boys and girls, while at the same time it is a drain on educational funds.

We have had a long struggle to introduce medical inspection in the schools and also to obtain provisions for exceptional and maladjusted pupils. In some communities, high rate taxpayers are insisting that the schools ought not to provide any services of this sort. Parents should look after the health of their children. If parents do not have their children's vision examined, so much the worse for their children. It is not the duty of the school to find out whether a child has normal vision, or normal hearing, or sound teeth, and so on. If we have to go back to the days when children in the public schools were not given the benefit of medical inspection, with recommendations for the elimination of defects and the improvement of health, it will be a sad blow to our educational work.

A large proportion of our educational people would rather sacrifice almost anything else than the services that the schools are rendering to handicapped children. If we have to go back to the days when maladjusted children were kept in the same classes with normal children, there will be many teachers who will be heartbroken over this reversion to primitive educational procedure. We have fought and bled in defence of the doctrine that education should be adapted to the individual traits and needs of pupils, and that the school should help each individual to overcome physical limitations to sound development of mind and character. If we must drop back to the practices of four decades ago on the plea of economy, most of us who are engaged in educational work will never get over our disappointment.

One of the most dangerous of all the suggestions for effecting economy in education is that the school year should be shortened from nine to eight or even seven months. If this can be done, the salaries of educational staffs can be reduced 20 or 25 per cent. Children can then have four or five months in the year for remunerative work. Well, how are the children to obtain this work? One of our most distressing problems now is to find work for mature men and women. Turn out boys and girls from thirteen to seventeen years of age two months earlier than we are now doing each year, and we shall have an even more aggravating problem on our hands than we have. As a matter of fact, these children, released from school, will not work; there will be no work for them to do. They will roam the streets; they will augment the stream of offenders who are passing through our juvenile courts. They will be out of school four or five months every year, and they will lose during the long vacation much of what they gain while they are in school.

There is absolutely not one good word to be said for the proposition that we should close the schools one or two months earlier than we are now doing. Instead of this we ought to add a month or two. Most of our school children are now in congested towns and cities, and they are vastly better off in the school than they are roaming the streets. So, we must resist, with all the force we can command, this proposal to curtail the school year. If we revert to the practice of earlier decades, when most pupils lived in the open country and they could be profitably employed for five months every year, we shall do irreparable harm to the educational work of this country.

Our Boys and Girls First

No more effective proposal could be made to clog the juvenile courts than that we should turn our boys and girls out into the streets for almost half of each year. We have been working exactly in the opposite direction for two decades. The schools have been holding an increasingly larger proportion of young people. In one decade, from 1920-30, the proportion of children of school age in school attendance has increased on an average of 12 per cent; in some states, as in New York, the percentage has increased as much as 25 per cent. The schools have thus been the most effective agency operating against the increase of juvenile disorderliness.

Whatever other measures we adopt to effect educational economy, let us not curtail the school year and leave our boys and girls for several months every year at the mercy of agencies that exploit and corrupt them for material gain.

A Modern Consolidated School on the Open Prairie



Blending the building into its setting and providing for future additions were the problems successfully mastered by those who planned the new Ovid High School, Ovid, Colo.

By T. H. BUELL & CO., Architects, Denver, Colo.

OVID, COLO., is situated in the extreme northeastern part of Colorado in a prosperous sugar beet farming community. The high school recently built there is one of the many consolidated schools in the smaller towns of Colorado which afford the pupils of the farming communities practically the same advantages as those of the larger towns.

With the consolidation of school districts, which centralizes effort and capital into larger but fewer buildings, have naturally come more efficient and economical educational units. This gives the architect and the school board a greater responsibility, and it was this idea that underlay the planning of the new Ovid High School.

The school stands on a site 260 by 400 feet. The building itself is 66 feet from the sidewalk and faces west, with the gymnasium at the rear. The dimensions of the main portion of the building are 173 by 60 5/6 feet. The dimensions of the adjoining gymnasium are 65 1/2 by 52 feet.

The school as it now stands forms a central unit which may be added to at any future time by extending the wings. In this way provision is made for the growing school population without in any way injuring the exterior design of the building or hindering its efficient operation. The

one-story wings are designed to support a future second story.

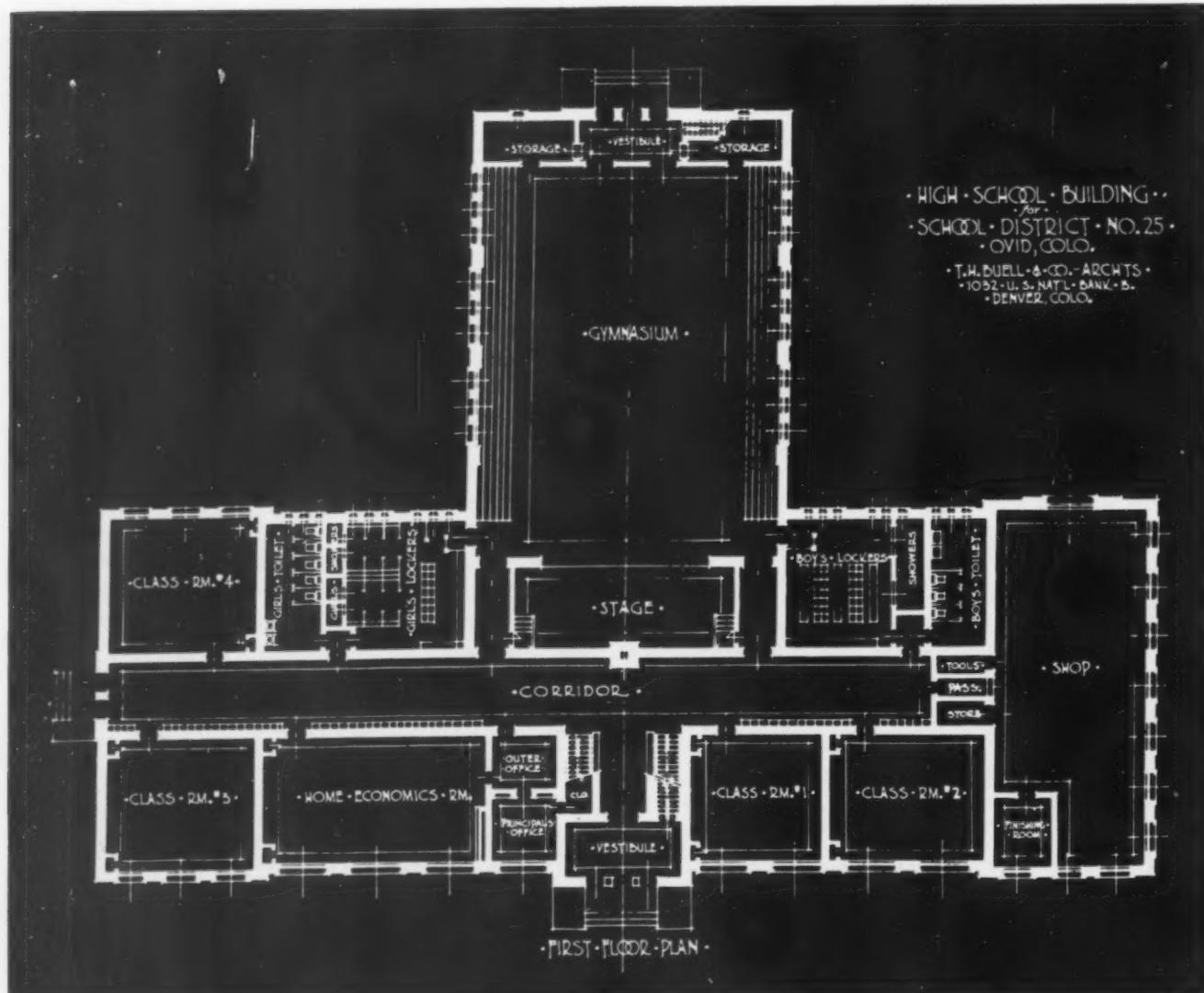
Outside of the educational planning, the most important problem was the designing of a building that would be appropriate to the location. Situated as it is almost alone on the open prairie at the edge of the town, it was necessary to produce a structure which would blend with the surroundings and which would have its decorative treatment in keeping with the natural setting. This required a comparatively rugged treatment, not too delicate in scale and yet not monumental in character—a building that would look well in the bright sunlight and yet appear appropriate and stable in stormy, cold or disagreeable weather. The color of the brick selected looks well in sunlight or shade and does not show deterioration from the numerous sand and dust storms to which it is subjected. Rather it improves with weathering.

Design Is Modernistic

The exterior is of modern design with vertical lines predominating, this being carried through the wide windows by the use of muntins. The pleasing and novel decorative treatment has been accomplished entirely with standard shaped brick,



The home economics room, opening on the main corridor on the first floor, is as well lighted as the other classrooms and is equipped with all facilities for teaching home making. The compact, convenient arrangement of the first floor is shown in the plan below.



and no stone or terra cotta has been used throughout the building. Since the brick is all light buff rug, without any change in color for pattern work, the effect has been produced entirely by projections. All floors, ceilings and walls of corridors, stairways and boiler room are of fireproof construction. Some of the cross partitions are of brick and the remaining cross partitions and floors are of wood construction. The roof over the gymnasium is of wood and is supported on steel trusses. The stair rails are of solid concrete with pyramided top, which makes a permanent sanitary construction.

Planning Specialist Is Consulted

In order to produce an efficient school and take advantage of all available expert advice, the school board obtained the services of a specialist in school planning to study and supervise the proportioning and locating of the various classrooms and other educational features. The building was then designed to harmonize with this scheme of operation.

There are adequate toilet and locker rooms at the sides of the gymnasium, the boys' rooms being on the same side of the building as the shops, and the girls' rooms on the same side as the home economics room. Such an arrangement eliminates much of the confusion of cross passage. The locker and shower rooms open into the gymnasium as well as into the main corridor, so these are available for use during games. The visiting team uses the girls' locker room and the home team

uses the boys' room. During theatricals these are used for dressing rooms. The girls' room has four shower stalls with three individual dressing rooms for each shower. The boys' room is equipped with continuous shower passage with four shower heads and a door at each end.

In the planning of the gymnasium, its use as an auditorium was also provided for and a stage was built at one end. The front of the stage is equipped with disappearing footlights, and provision has been made overhead to accommodate amateur theatricals. A need for economy, however, has somewhat limited these possibilities. The combination gymnasium and auditorium may be entered directly from the outside at the rear. The ticket office is so placed that the main school portion need not be used during evening games, except for the emergency exits. During school hours, the entrances to the gymnasium are from the main corridor.

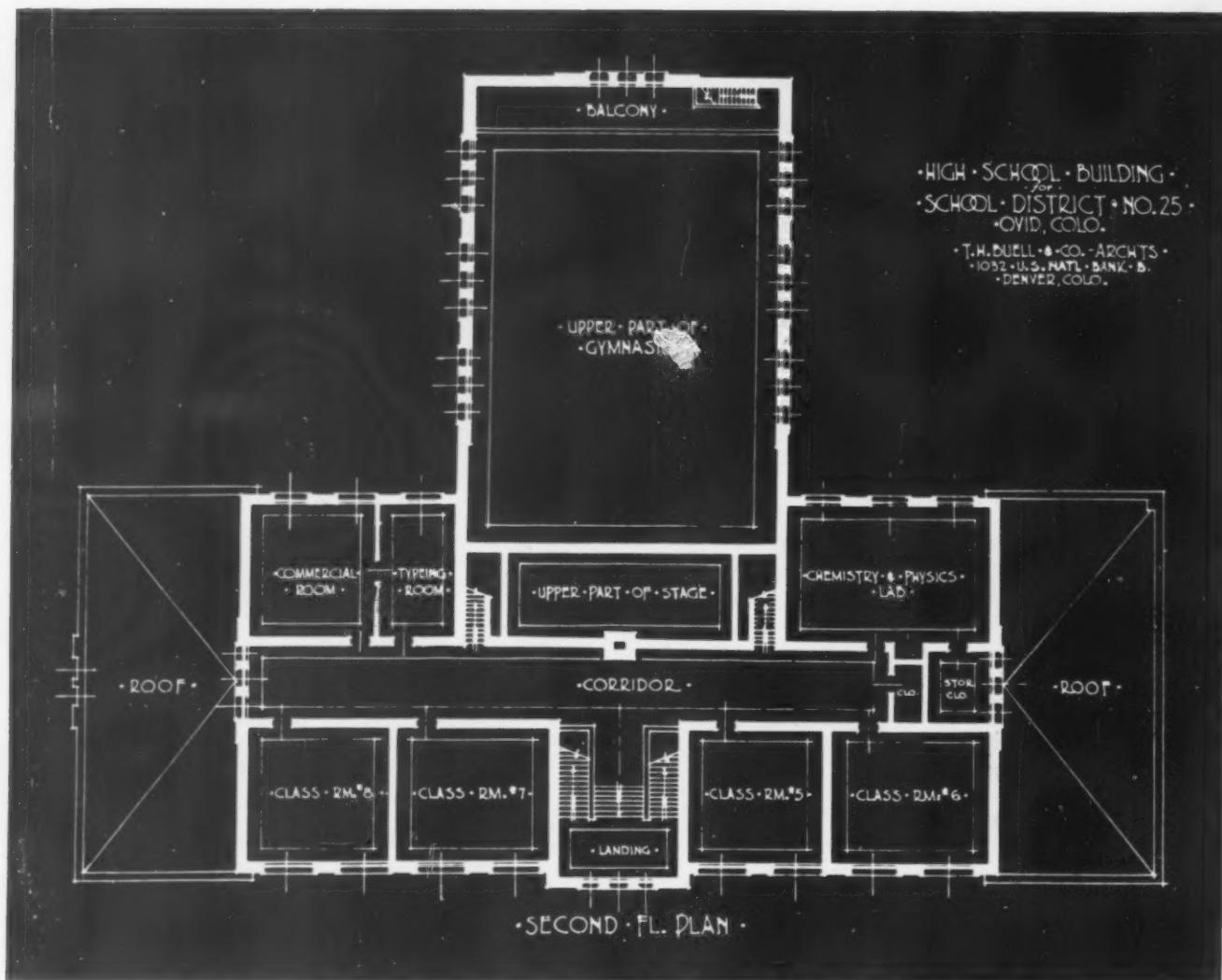
Improving the Acoustics

A small balcony which seats fifty persons is provided at the rear of the room over the outside entrance vestibule and the ticket booth. Permanent bleachers along each side of the gymnasium have a seating capacity of 190 persons for use during games. When the room is used as an auditorium, there can be installed 360 folding chairs. These are stored in rooms under the balcony when they are not in use.

A permanent basket ball goal is provided on the front of the balcony, but the one at the oppo-



The shops are on the first floor and are in close relationship to the boys' locker and toilet rooms.



Classrooms and the upper part of the gymnasium occupy a large part of the second floor.

site end is on a swinging frame which can be raised and suspended from the ceiling when the stage is in use.

The ceiling of the gymnasium is lined with standard sound absorbent material in its natural color. The use of this material greatly helps the acoustics, makes a pleasing treatment and acts as insulation. This is placed on furring strips on wood ceiling joists. The interior finish of the gymnasium walls is of brick with a decorative brick treatment. The ceiling is twenty feet high.

A Light, Quiet Library

The library is on the third floor and is thus isolated to a large extent from the general confusion and noise that occur at times in other parts of the building. This location also made it possible to place windows on both sides of the room, assuring almost ideal lighting conditions.

The classrooms have adequate window area, the required amount of blackboard space and also a sufficient number of tack boards for the posting of bulletins and displays in a neat compact space.

Most of the classrooms have a west exposure, which is desirable in Colorado, and all have strictly unilateral lighting. All rooms that are used in educational work are above grade. This arrangement removes all chances of a pupil's having to sit in a damp, poorly lighted and ventilated room. The only use made of the basement is for the boiler and coal rooms and a large storage room, this space being accessible from both an outside and an inside stairway.

In order to provide as sanitary a condition as possible and also to limit the labor of cleaning, all moldings and trim were kept plain, or eliminated entirely where possible. The jambs of all windows and doors have rounded plaster corners without casings, and interior window sills are formed with a cement wash without projections. The windows of the entire building are of steel to provide longer life and a greater light area. Black finish was used throughout for all interior metal, so the hardware, the switch plates and all similar items are in harmony.

The heating is of the two-pipe system of direct

radiation except the gymnasium, which is heated by means of unit fan heaters in the rear wall. The boiler stack is near the center of the building and runs through the three-story portion in order to eliminate as much free standing height as possible.

The electric wiring was included in the general contract, and the same attention was given to its designing as was given to the other parts of the work. Plenty of lighting and convenience outlets were provided, as were also adequate power outlets for present and future motors in the shop portion. Outlets were also installed for connecting electric ranges in the home economics room.

An effective bell system is in use. Bells in each corridor and on the exterior of the building operate automatically from a master program clock in the outer office. Fire alarm bells on each floor are operated by push buttons in the library and office.

Although the amount of money available for the building was naturally limited, economy was not gained through the use of inferior materials and workmanship, but rather by the arrangement of space and a study of the proper uses of materials. The interior trim is of oak and all structural parts are designed to produce a building that will stand for years to come. Neither has economy been achieved by the slighting of safety and health features so necessary in a building in which children must spend the greater part of the day. Adequate lighting, good plumbing and an ample number of emergency exits have been provided.

The final cost of the building was slightly less than the original contracts, due to a few changes made during construction. The building contains 390,000 cubic feet. The general contract, including electric wiring, amounted to \$68,652.52; heating and plumbing cost \$10,049.51. This makes a total cost of \$78,702.03, or approximately twenty cents a cubic foot.

English System of Education by Radio Wins Public Favor

The British system of educational broadcasting, operated by the Government through the postmaster general, is favored by the public and will continue its experimenting, according to a report prepared and approved at the office of the American Consulate General in London.

The report, entitled "Educational Broadcasting in the United Kingdom," says that "the present system, which excludes all programs of a commercial nature, has since been accepted as definitely superior by both the press and the public."

Broadcasting in England is a Government monopoly operated by the British Broadcasting Corporation, the report explains, but no station is confined to specialized or biased types of programs. Touching on advertising, it asserts that "it may be safely said that the future introduction of radio advertising in Great Britain is highly improbable."

The broadcasting of programs to schools has been conducted by the British Broadcasting Corporation since 1924, but until 1928 was largely on an experimental basis. As a result of the so-called Kent Experiment of 1927, a formal program and regular hours were definitely scheduled. In 1927, also, the central council for school broadcasting was organized on the same plan as that for adult education.

The amount of time given to school broadcasts is, at present, five hours and thirty-five minutes a week.

The exact figures on the number of schools equipped with radios are not known. The corporation, however, is in correspondence with 5,462 schools which have either asked for advice or sent criticisms or suggestions concerning the programs.

The publication of the corporation's new educational weekly, *The Listener*, was begun in January, 1929. Its chief purpose is to provide those interested in the educational talks with supplementary literature on the questions discussed over the radio, as well as an inexpensive source of information on all subjects of intellectual interest.

New York Central School Law Is Upheld by Courts

The New York Court of Appeals has upheld, without opinion, the authority of the commissioner of education to lay out districts for the establishment of so-called central schools. The court affirmed the decision of the appellate division, fourth department, holding the central school law constitutional.

The law reads as follows:

"The commissioner of education is hereby authorized and empowered to lay out in this state in any territory exclusive of a city school districts conveniently located for the attendance of scholars and of suitable size for the establishment of central schools to give instructions usually given in the common schools and in high schools, including instruction in agriculture."

The appellate division had rejected the contention of those challenging the law that it delegated legislative powers to the commissioner of education.

Promotions and Their Relation to School Costs and Test Scores

That school executives need to consider carefully their promotion policies and practices is shown convincingly in this study of 328 twelve-year curricula in Pennsylvania

By M. A. STEINER, Supervising Principal, Ingram Public Schools, Ingram, Pittsburgh, Pa.

WHAT conditions relative to promotions exist in the different schools and in the different grades? What is the relationship between the percentage promoted and certain items of school costs? What is the relationship between the percentage promoted and standard test scores? These are but three of several significant questions that arise in connection with the study of promotions.

For this study promotion data were collected from the annual summary reports of attendance for 1927-28, on file at Harrisburg, Pa. For the past eight years, the attendance bureau, department of public instruction for Pennsylvania, has required each supervising principal¹ to make such an annual report. From these reports for 328 school districts that had complete twelve-year curricula and employed supervising principals, the following facts were obtained: the average percentage promoted for the entire school; the grade in each school that had the highest percentage promoted; the grade that had the lowest percentage promoted.

How the Grades Ranked

Only 264 reports contained the average percentage promoted for the entire school. A considerable number of the sixty-four incomplete reports gave the percentage promoted in the elementary grades and stated that promotion was by subjects in the secondary school. This was, doubtless, only an excuse, for all these reports showed that pupils were classified by grades in the high school and must have been promoted on the basis of a certain number of credits for each grade. Table I shows the range and distribution of the schools according to the average percentage promoted and gives the statistical constants.

¹Such an official may be employed in any fourth class district, less than 5,000 population, or in a third class district, 5,000 to 30,000 population, that does not employ a superintendent. Qualifications are the same as for a superintendent.

An examination of the table shows that the percentage promoted in the different schools ranges from 78 per cent to 99 per cent with almost a normal distribution. The median for all these schools is 91.5 per cent, only a little higher than the average, 90.9 per cent. The probable error in each case is so small that these figures are highly reliable.

A record of the grade in which the lowest percentage of promotion existed in each school was obtained for the purpose of comparing it with the grade which had the highest percentage promoted. The range for all of the schools in the lowest percentage promoted is from 44 per cent in Grade 5 to 94 per cent in Grades 1 and 2. The range in the

TABLE I—DISTRIBUTION OF SCHOOLS ON BASIS OF AVERAGE PERCENTAGE PROMOTED

Percentage Promoted	Number of Schools	Percentage Promoted	Number of Schools
98-99	6	86-87	17
96-97	15	84-85	15
94-95	39	82-83	9
92-93	57	80-81	11
90-91	59	78-79	2
88-89	34		
		Total	264
Median	91.5±.196	Mean	90.9±.259
Quartile	2.55±.183	S. D.	4.21±.183

highest percentage promoted is from 90 per cent in Grade 8 to 100 per cent in several grades.

In tabulating the number of schools with the lowest and highest percentage promoted in the different grades, it seemed advisable to include two grades in the case of a few schools in which two grades were tied for the lowest percentage promoted, but there were so many schools with several grades that had 100 per cent promotions that all such cases had to be omitted.

Little uniformity existed among the schools in regard to the grades that cause the least or the greatest number of failures. The first grade ranked the lowest in the percentage promoted in 24.3 per cent of all the schools, but this same grade also ranked highest in the percentage promoted in 1.3 per cent of the schools. The record for Grade 12 showed an almost entirely opposite picture, but there was greater agreement. Only

The correlations between the average percentage promoted and the unit costs and test scores previously described were computed by Pearson's Product Moment Formula. These correlations and their probable errors are shown in Table II.

Several significant facts can be deduced or inferred from the correlation table. It really presents two distinct pictures. Although no coefficient of correlation, except the one for English, is three

TABLE II—PERCENTAGE PROMOTED CORRELATED WITH SCHOOL COSTS AND TEST SCORES

<i>School Costs</i>	<i>Percentage Promoted</i>	<i>Test Scores</i>	<i>Percentage Promoted</i>
Teachers' Salaries . . . . .	.104±.042	English . . . . .	.187±.056
Total Supervision . . . . .	.108±.043	History . . . . .	.050±.059
High School Teachers Only . . . . .	.070±.063	Average on All . . . . .	.090±.062
Current Expense . . . . .	.067±.042	Otis . . . . .	.125±.055

.3 per cent of the schools had the lowest percentage promoted in Grade 12, and 47.8 per cent had the highest percentage in that grade. It is interesting to note that Grades 7 and 9 ranked next to Grade 1 in the percentage of schools that had the lowest promotion in these grades. Since few schools had the highest promotion percentage in these same grades, such a record seems to indicate poor articulation between the elementary and the junior high school and between the eighth and ninth grades in the 8-4 type of organization.

For the purpose of comparing these promotion records with the amount of money spent in these same schools, the financial data for 1927-28 were collected from the annual financial reports on file at Harrisburg. The total current expense, which does not include debt service or capital outlay, the cost of teachers' salaries and the cost of supervision were divided by the average daily attendance for each school. These unit costs were then compared with the percentage promoted.

Besides these facts, the percentile ranks of 178 of the schools included in this study were obtained from the Carnegie Foundation for the Advancement of Teaching in the Pennsylvania study of high school seniors. About 900 high schools were included in that study, but the schools included in the present study seem to be a fair sample of the entire number. Since tests in English and in American history are the only subject tests that include all the schools, these two test scores along with the Otis Intelligence Test scores and the average rank for all the nineteen tests used will be compared with the percentage promoted. The relationship between the standing of high school seniors and the average percentage promoted in all of these schools should suggest some facts relative to promotion policies or practices.

times its probable error, some inferences may be drawn from each side of this table.

In attempting to explain the low correlations between the various items of school costs and the average percentage promoted, it will be necessary to challenge some generally accepted beliefs. Since all these correlations are so low, it is evident that no significant relationship exists between the amount of money spent and the percentage of pupils promoted in the schools included in this study. The correlations for teachers' salaries and for current expense include 251 schools and should be reliable. One possible explanation for this lack of correlation between costs and the percentage promoted is that promotions are not based upon attainment but upon some policy inherent in each system regardless of what is spent for the various functions that have been described and analyzed in this study.

The other picture presented in Table II is even more surprising and unexpected. It is true that these correlations between the percentage promoted and test scores are not based directly upon the same group of pupils, but the standing of a school system based upon the scores of its seniors is probably about as accurate an index of the entire school as could be obtained by including the pupils of more grades. Since these tests are measures of attainments covering all four high school years, correlations between them and the percentage promoted are valuable.

The evidence presented by these correlations correspond with that indicated by the opposite side of the table; for when promotions are based upon ability to pass standard tests, a negative correlation exists between the percentage promoted and the test scores. When the lowest 10 per cent of the pupils on standard achievement tests are

failed, an increase in grade averages will occur. This condition decreases the percentage promoted and increases the grade averages, which causes a negative correlation. Since insignificant positive correlations were found between the percentage promoted and test scores, it can be safely asserted that promotions in the schools included in this study are based upon arbitrary standards rather than upon the kind of achievement measured by standard tests.

This analysis and interpretation of the promotion records of 328 Pennsylvania school districts employing supervising principals and having full twelve-year curricula indicate a great need for a more careful consideration of promotion practices and policies. The promotion reports required by the department of public instruction are not carefully prepared by school officials. The conditions discovered by this investigation clearly show that each local school system is not making the best use of these annual promotion records for systematic improvement. Although these blanks do not provide for semiannual promotions or for subject promotions in the secondary school, every supervising principal needs to give careful consideration to promotions in his school and to keep cumulative records of them. By doing this, it will be possible to discover trends in each school and to compare its results with the average percentage promoted of 90.9 for all the schools.

Closer Articulation Is Needed

Since this study shows that there is considerable variation in failures for the different grades, it is necessary to give careful consideration to conditions in Grades 1, 7 and 9. It evidently suggests the necessity of closer articulation between the different units of the school system. The conditions that make it possible for a considerable number of schools to promote 100 per cent need study and investigation.

In the schools included in this study, there seems to be no significant relationship between the amount of money spent for salaries alone or for the total current expenses and the percentage of pupils promoted. This does not necessarily mean that educational service to pupils is not related to the money paid for it, because promotions are doubtless based upon some arbitrary standards in many schools and are no indication of the work done.

The same fact is suggested by an examination of the low positive correlations between the percentage promoted and test scores. When pupils are promoted regardless of their ability as measured by standard achievement tests, no relationship will exist between these two variables.

Whenever promotions, from the standpoint of achievement tests, eliminate the weaker pupils, grade medians will increase to some extent as the percentage promoted decreases, thus causing a negative correlation.

It may be asserted that the promotion records analyzed in this study are not being used systematically and effectively to improve conditions in the various schools. The chief value of this study, therefore, lies in its ability to create sufficient interest in the problem of promotions to induce school executives to study their promotion policies and practices.

Public Education—The Country's Sixth Largest Industry

School property throughout the United States has increased approximately 12 per cent in value since 1929, according to information recently made available at the Office of Education.

It is estimated that at the end of 1930 the value of school property reached the unprecedented figure of \$6,165,689,878, according to returns from thirty-eight states.

In actual investment public education ranks sixth among the leading industries. Agriculture, railroads, oil, electricity and lumber have greater investments. It ranks fifth as an employer, with approximately 1,000,000 teachers employed in the public schools of the country.

Salaries to teachers in the United States now exceed \$1,165,000,000 annually. Teachers have become substantial purchasers and thereby they contribute tremendously to the buying power of the communities in which they reside.

The public schools, in addition to property valued at over \$6,000,000,000, have themselves become great spenders. Aside from what is expended in the form of salaries, something like \$400,000,000 is spent annually for capital outlay. This involves real estate purchases, the construction of buildings, the buying of school equipment.

As the enrollments have increased, building has gone forward rapidly and billions of dollars have been invested in schools, supplies and equipment of all sorts to meet modern needs. For example, in 1929 nearly \$40,000,000 was spent for busses and the transportation of pupils to and from school, a responsibility unassumed by most school systems until the advent of the automobile.

While the investment in public education in the United States has risen to a high point, and the expenditures annually exceed \$2,000,000,000, what is actually spent for education represents but 2.4 per cent of the national income.



How the Home Can Make or Mar the School Health Program

It is useless for the school to attempt any comprehensive program of physical education until the home has signified its willingness to cooperate in every possible way

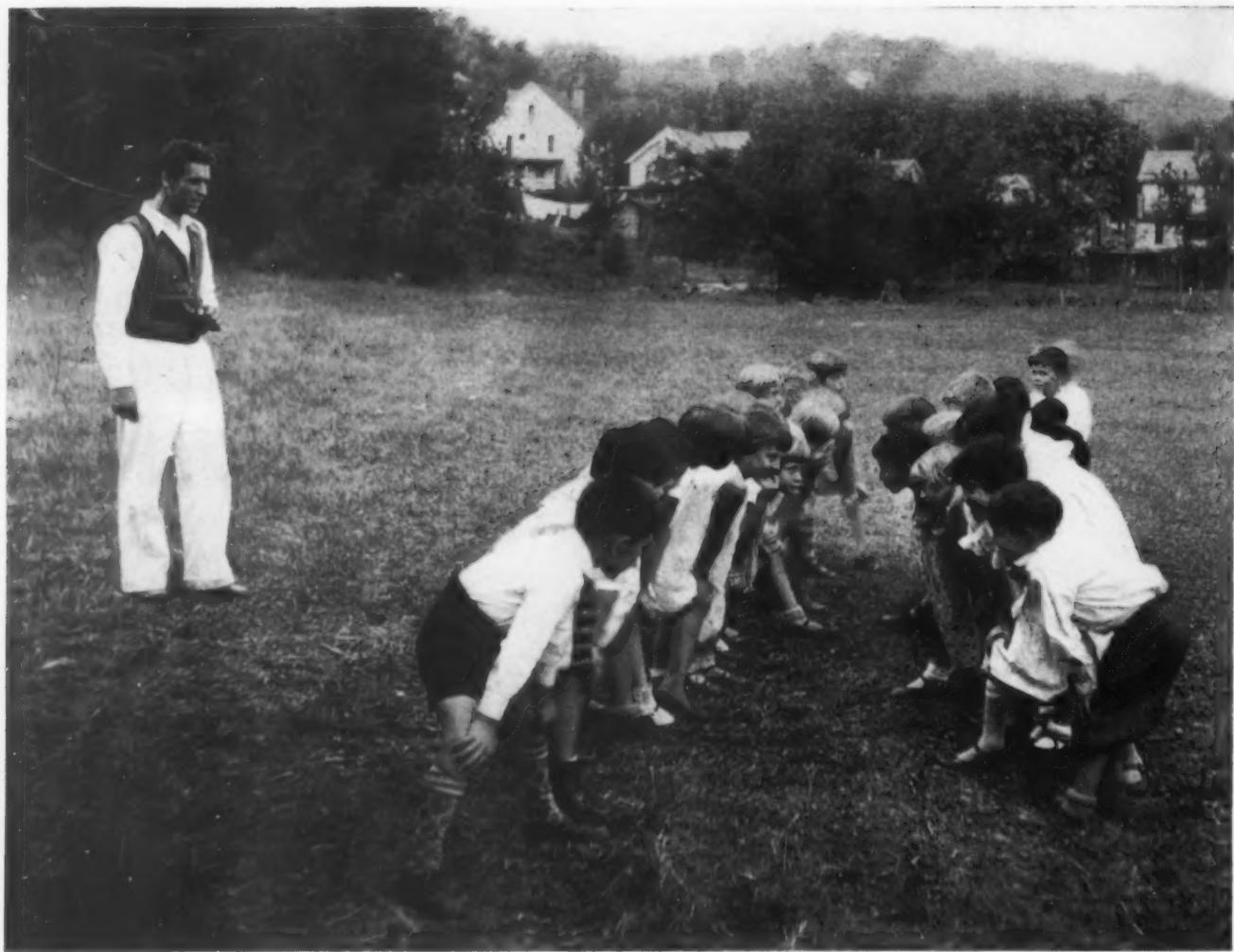
By CHARLES C. GIAUQUE, Director of Health Education, Ohio University

IN THE final analysis the home, not the school, is responsible for the health of the child. One sometimes runs across busy parents who are quite willing to pass over the entire responsibility for the health of their offspring to the school as soon as the children enter that institution. It is perfectly obvious, however, that the school can have little influence upon the formation of the proper health habits on the part of the child if it is compelled to combat certain fixed characteristics that have been developed in the home.

It has been said that the home controls the body of the child. It will certainly be difficult for the school to eradicate long established habits which are detrimental to the health of the child and which have been developed in the preschool years. It may even be difficult to inculcate proper health behavior on the part of the school child whose home offers no cooperation.

In our school health program we have gone beyond the stage when we were satisfied with passing on to the child a certain amount of health knowledge or information. In this particular branch, it is especially true that knowledge without action is valueless. The teaching of health must be concerned with the development of health habits. It is perfectly obvious that if a child's behavior is to be modified, it will take the constant attention of parents as well as teachers. A habit cannot be developed in the school alone. The home must cooperate.

Many conditions of the home environment and actions of the parents of some pupils greatly handicap the proper working out of the school health program. For example, consider the attention that a written notice from the school physician concerning the health of the child receives in some homes. There is no more response to it than to the



Active, well planned recess periods not only are beneficial to the pupils' health but also arouse their interest in games that they should play during their home recreation periods.



ordinary form letter. For this reason a notification concerning defects discovered during the health examination should be followed by a personal visit by the nurse or teacher. In a certain large city a printed notice was sent home asking a certain parent whether she would like to have the Schick test given to her daughter, Mary. Upon receiving the letter, the indignant mother immediately went to the school with the reply, "No, sir,

the cause of such illness is determined. Such action is necessary for the well-being of the particular child as well as for that of the others with whom he might come in contact in school. Fourth, parents should not try to have their children excused from physical education classes in schools unless there is a bona fide reason for such exemption. Unfortunately there are still some obliging family physicians who are willing to write out an excuse for a child who really should not be excused from



Keeping an eye on the children during the summer is an important phase of school health work.

I don't want my Mary to have any test like that. I seen that Sheik in the movies."

Various ways in which parents can cooperate with school health authorities have been mentioned by writers on health. First of all, parents and their children may profit considerably by a perusal of the health examination blank which is sent home by so many schools. They must then assume the complete responsibility for the correction of defects discovered by the school health examination. Second, it is wise for parents to attend the health examination. In this way, in case the child has any defects, they can learn exactly what they are and what measures should be taken for their amelioration or cure. Third, children should be kept at home when symptoms such as vomiting, sore throat and rise of temperature appear, until

this part of the school program. Only recently a child received a doctor's excuse from physical education for the reason that he was "too awkward" to engage in such activities!

It is not difficult for the teacher to determine what kind of health training a child gets at home. Someone has said that the home goes to school by way of the child. The home is in a position to inculcate desirable health habits in the child before he enters school and to take steps to have these habits continued throughout the growing years.

Parent-teacher associations can wield a powerful influence in the matter of cooperation between parent and teacher in the development of such habits. Wootten¹ suggests two measures as a con-

¹Wootten, K. W., *A Health Education Procedure*, National Tuberculosis Association, New York City, 1927, p. 181.

tribution to the school health program by the parent-teacher association: (1) A standing health committee which should constantly keep in mind the question of the health of the pupils and carry on a continual campaign to better the school health program; (2) several programs during the year given over to health needs of the school, with such topics as school health equipment, the hot lunch, health supervision, the symptoms, causes, prevention and cure of malnutrition, play in education and the health of the preschool child. Many other subjects can immediately be thought of that will be more particularly fitted to a specific situation.

The school, by means of its influence upon the child, is contributing greatly to the welfare of the home and must continue to do so. Every positive influence of the school has its effect upon the home. But the school in turn must do its utmost to make certain that all of these influences are positive. The school environment has of necessity to be as good or better than that in the best home of the community. If such a condition is not present, parents would be entirely justified in objecting to compulsory school attendance laws. Wootten sums up the school's responsibility as follows: that every precaution be taken against the spread of communicable disease; that remediable defects be prevented or corrected; that favorable environmental conditions surround the child while he is at school.

Of course it is easy for the teacher to lay the blame for the development of improper health habits on the home. The home may be doing the best it can under the conditions and at the time in which it serves. On the other hand, it is easy to criticize the work of health educationists. The field is new, and new subjects, at best, progress slowly. Success will be nearer when the home and the school move on, hand in hand, in search of more hygienic environmental conditions and finer types of instruction in healthful behavior for the child.

Illness Causes More Absences Among Girls

A study among school children by the Public Health Service reveals that girls lose more time from school on account of sickness than boys but that boys are absent for other reasons more often than girls.

Data collected from eighteen localities in Missouri and Maryland show that in the aggregate the percentage of lost time due to sickness is slightly higher for girls than for boys and that the percentage due to sickness is distinctly higher for the younger than for the older children.

The school records for one year in thirteen Missouri localities show that 65 per cent of the number of days lost by children of all ages was due to sickness. It was found that the number of school days lost per 100 children during the school year was 1,550 by boys and 1,526 by girls, that sickness was the cause of 1,042 lost days by girls and 966 by boys, and that causes other than sickness resulted in 484 lost days by girls and 584 by boys.

In four other localities in Missouri studied by the service, 58 per cent of school days lost was due to illness and 42 per cent to other causes. In these localities the number of days lost per 100 children was 1,089 by boys and 1,058 by girls. Sickness was responsible for 597 lost days by boys and 653 by girls while causes other than sickness resulted in 492 lost days by boys and 405 by girls.

The records taken during two school years in Hagerstown, Md., showed that the average time lost per school year per child was thirteen days, of which 7.4 days was due to illness. The percentage of lost time due to sickness in this locality, it will be seen, was almost identical with the figures cited in the four Missouri localities, the proportion in the Maryland community being 57 per cent.

The Hagerstown records showed that 23 per cent of the children had no illness causing absence from school during the year and that 15 per cent of the children lost fifteen or more school days on account of sickness. The data also reveal that 35 per cent of the children had no absences from causes other than sickness during the year, that 43 per cent had from one to four absences and that 22 per cent were absent five or more times during the year.

Economic Welfare of Teachers Is Subject of Year Book

"Teachers Become Their Own Bankers," might well be the headline of a news story describing the sixth year book of the Department of Classroom Teachers, National Education Association. Credit unions, benefit associations, teachers' loan and relief funds, insurance, personal budgets, savings and investments, and salary schedules are principal topics of this publication called "The Economic Welfare of Teachers."

Sick leave, sabbatical leave, contractual status, retirement systems, tenure and homes for retired teachers are other subjects related to the business and economic interests of teachers that are discussed. The study sets forth the principles of each one of the activities or interests, and describes how they are practiced in various states and cities of the country.

Ways a Teachers' College Can Help the Novice in Teaching

By E. C. HIGBIE, President, Eastern State Teachers College, Madison, S. D.

This department of rural education is conducted by Helen Heffernan, chief, division of rural education, state department of education for California, Sacramento.

SEVERAL years ago a letter came to my desk from a superintendent of schools in a village about sixty miles distant from Madison, S. D., stating that one of his teachers, a graduate of Eastern State Teachers College, Madison, was failing in her work. The teacher mentioned had been out of school two years, and, as far as we knew, had proved successful.

Never before had the question of "How far do the postgraduation responsibilities of a teachers' college extend?" confronted us so flatly. The dean and director of training and the supervisor who had directed the work of the teacher concerned were called in for a conference. It was decided that the supervisor should visit the school and get at the bottom of the difficulty.

How the New Service Was Started

So was born the follow-up service at Eastern State Teachers College. The supervisor was directed to remain with the failing teacher two or three days, if necessary, and do everything in her power to help her to solve her problems and to adjust herself to her duties. When the faculty member returned to the campus, the importance of what had been done so impressed itself upon our minds that a director of follow-up service was added to our staff and given the problem of organizing the work designed to be of benefit to all recent graduates within our area. At the beginning of the next school year this director set to work to make contacts not only with graduates but also with the county, village and city superintendents with whom they worked.

Because of the importance that the follow-up service rapidly assumed and the significance of the conditions revealed, we have come to feel that the teachers' college should assume a measure of responsibility for the teaching success of its grad-

uates. We have therefore made the follow-up service one of the four major phases of our organization. These are: selection of the right types of students; development of a proper cultural background for each teacher in training; basic preparation in the art and science of teaching, and an adequate handling of certain postgraduation responsibilities. The first three naturally culminate in the last, which is the phase with which this article deals.

How a Teachers' College Should Function

Of the many responsibilities that a teachers' college should assume, there are two of prime importance—the proper placement of graduates and careful follow-up of their work during the first year or two of their teaching. These two services are so closely related that they may be considered together, but before speaking of this responsibility, it seems necessary to state two general principles that seem to me to be fundamental not only to adequate handling of postgraduation responsibilities but to the three other responsibilities as well: (1) State teachers' colleges are established, not primarily for the benefit of the students enrolled, but directly for the service of public education in the state and in the country. (2) Each teachers' college should recognize a definitely delimited service area and should study that area so as to know conditions, needs and possibilities in it. It should organize to meet the needs and provide leadership in developing the possibilities. (This is to be done in cooperation with the department of education and other statewide agencies.)

With a full knowledge of the needs of the area it serves, a college can set out to attract to its doors students of the type, quality and number that will tend to meet the requirements. With some responsibility assumed for placing in good positions the

greater proportion of the students it allows to graduate, the college will tend to exercise care both in their selection and their training.

During the last twelve years there has been a decided development in placement activities within colleges. Not many years ago the service of finding positions for students ended with the posting on bulletin boards of lists of vacancies, compiled from information received in the offices of the dean, the registrar and the business manager. From these lists students selected openings that seemed desirable and sent out applications—one, two, a dozen or fifty, as the desire and need for a position might dictate. At present, practically every college has its bureau, office, committee or secretary of placement. In many cases an elaborate organization is at the free disposal of both students and employers. However, in the larger institutions, especially, the service tends to become complex and impersonal, except, perhaps, for a relatively small number of students who because of outstanding qualities have impressed administrators with their personalities.

Factors That Influence Placement

We feel that the success of our students depends to a large extent upon the care exercised in their placement in teaching positions and upon our ability to help them in their problems during the first year or two of their work through our follow-up service. In order to place students carefully, we feel that there must be exact personal knowledge at the command of the placement bureau, together with data gathered from those in personal contact with the prospective teacher. Most of all do we rely upon supervisors for recommendations of students. We believe that we are justified in so doing because the heart of the public educational work is classroom teaching, and ability in classroom teaching does not necessarily advertise itself to everyone in a college organization.

At the time the supervisor was sent out to help the failing teacher, the two general principles of the plan were already clear in our minds. Our service area had been outlined, and through our extension division we had made some study of conditions and needs. Because of our knowledge of conditions, our placement bureau was able to choose for positions students who seemed, because of personality as well as training, to be suited to the community in which they would work. Much intelligent care was given to this part of our work before our follow-up service was instituted.

During the first year of our follow-up service, most of the work was done by the director. Both graduates and superintendents were sent personal letters which offered the help of the institution and requested permission for the representative of the

college to visit their schools. Through these letters, a few emergency cases were located and supervisors were immediately sent out to help in the particular problems that had arisen. Later, when large numbers of requests for visits had been received, itineraries were arranged for several supervisors to visit their own former pupils, each to spend a week at a time in the work and each to be absent from the college at a different time. The work of the visiting supervisor, while she was engaged in the follow-up service, was looked after by other supervisors and by the director of follow-up service.

In order to make the work as economical as possible, a visiting supervisor was scheduled to call upon all of our graduates within the particular county, village or city system visited. This plan worked out better than we had expected, for all of the supervisors responsible for training work co-operate in their training plans and come to know rather well the work of each other and the student teachers assigned to each.

After the actual visitation work began, it was possible to solve many problems that had confronted us at first. At present the teachers and the superintendent know when the supervisor will get to the school; in fact, they are prepared and looking for her. If the schools visited are chiefly rural in character, the county superintendent usually goes with the supervisor and works with her, often learning much from her as to procedures and methods. Frequently it is the privilege of the supervisor to break down defense mechanisms that naturally arise between the new teacher and the superintendent.

How the Supervisor Helps the Teacher

After observing for a time the way the teacher conducts her work, the supervisor talks over the whole situation with her, commending the good things she has done and making suggestions for such improvement as she thinks possible. The supervisor is usually plied with questions, and when this occurs she is in the best possible position to help. Often difficulties are overcome by recalling to the teacher different parts of the training she received during her college work. Sometimes this training seems to have dropped completely out of the teacher's consciousness. The supervisor suggests references and helps find material. She discusses local needs. Often she will take charge of a class to demonstrate how the teaching should be done. She tries to bring the teacher to a point where she can objectify her problem. There are scores of ways in which a helpful supervisor can be of service. In a county, village or city system where a number of graduates are employed, eve-

ning or Saturday conferences have proved helpful.

An important part of the school visit is the contact supervisors have with the superintendent or principal. Frequently these officers have been promoted or chosen for their positions because of personality rather than training. Being inexperienced in supervision, they do not know how to help the new teacher properly to adjust herself. They can learn much from the visiting supervisor, and the supervisor can learn much from them.

Again, the supervisor may have a chance to meet and confer with school board members. Sometimes these members are alarmed over conditions and need to be led to consider the situation dispassionately. More often, perhaps, they are helpless before a real problem. Here, too, is an opportunity, not only for the school board but for the college representative and indirectly for the institution she represents.

It has been suggested that the supervisor learns a great deal while on these trips. Because of this fact, the visitation work has an effect upon the college. In her work the supervisor has become accustomed to certain devices and procedures. As she uses them in her training work on the campus, these devices are effective and satisfactory, and she naturally tries to teach them to her students. Sometimes, however, these procedures are entirely unfitted for use under public school conditions and when a supervisor sees her pet methods unsatisfactorily applied, she begins to check up on herself as well as on the teacher being visited. Here is a situation that may lead ultimately not only to reevaluations and new discoveries in particular procedures, but even into the larger problem of curriculum revision.

How the Work Is Conducted

The specific duties of the two agents in direct contact with this work, the director of follow-up and the supervisor, as these duties have been finally organized, will be of interest.

The duties of a director of field service are: to learn the location of graduates; to prepare and send out form letters to superintendents; to prepare and send out form letters to teachers; to receive answers to these form letters; to arrange emergency trips; to arrange supervisors' itineraries; to standardize procedure and records; to hold preparatory conferences with the supervisors; to receive reports of returned supervisors; to complete records and arrange for supplementary attention to specific needs; to help organize institutional results.

The duties of a visiting supervisor are: to have a preparatory conference with the director; to have a preparatory conference with the superintendent;

to visit classrooms; to confer with the teacher of each room visited; to demonstrate good teaching or give any help possible; to confer again with the superintendent; when it is advisable, to confer with the school board; to prepare reports and records of visits made; to report to the director.

What Experience With the Plan Shows

Persons outside of the college who have become interested in the project have asked certain questions in regard to the work. In the light of our experience only a few of these questions can be stated and answered at this time.

1. Is not this follow-up service work just another way of piling supervision on supervision? Does it not tend to increase an already serious problem rather than to simplify it?

The use of the word "supervisor" for the old term "critic" on our part may tend to confuse. Follow-up work is not supervision. Rather it should be spoken of as an extension of training. It does not in any way conflict with the state or county plans for supervision, it only supplements such programs.

2. Do not teachers resent the plan, feeling that they may be considered as failures if a supervisor visits them?

This attitude has not been found anywhere. The teachers welcome the supervisors who trained them. They have many urgent questions to ask. Of course, supervisors differ in their ability to create this attitude, but if the training supervisors are of the right kind and have built up confidence before the trainees have finished their courses, there will be no trouble at all in this connection.

3. How do the training supervisors take to the idea?

The training supervisors are enthusiastic and are anxious to go out and help their former pupils. This fact has really been a surprise to all of us. These supervisors enjoy the week in the field, and they come back with new enthusiasm for work.

4. Is the work valuable for rural schools as well as for village and city systems?

Probably its greatest value is for the rural schools. Such schools are relatively unsupervised in our part of the country, and county superintendents have shown great interest in the plan.

5. Can training supervisors be depended upon to make favorable contacts and not to do more harm than good?

The majority of them can. Criticisms of only a few have come back to the administration, and these few were of an undesirable type and would have been displaced in any event.

6. Is your contention that the college should assume responsibility for effective service after

graduation really defensible? Should teachers' college enrollments be limited according to needs?

After several years of experience in trying to assume some of this responsibility, we are more than ever convinced that the policy is sound. Of course this whole problem of adapting service to need will ultimately change the focus and organization of our institutions. Colleges that are primarily interested in enrollment and certain types of prestige will undoubtedly object to this policy, but we feel that eventually governing boards and many other agents are going to take a hand in the matter and compel more effective functioning of teacher producing institutions. This is an interesting question that will be considered by the Federal Commission on Teacher Training.

Starting the New Service

7. Just how would one introduce an organization of this sort into a training institution?

First, a director or secretary of follow-up service should be employed, possibly someone already in the organization who has vision regarding the possibilities of the work. This person should study the matter carefully and proceed cautiously. Perhaps the first thing to do is to send out letters to the recent graduates and to the superintendents under whom they are working. On receipt of answers to these letters, itineraries can be worked out and supervisors released for a week from the training school. In most cases it will be found that the adjustment of the work during the supervisors' absence from the training school can be made without much difficulty. The supervisor then should study the needs of her particular itinerary and make full reports to the director covering her findings. At the beginning the organization should be simple. Perhaps the less publicity the work receives during its initial stages, the better. Undoubtedly the director of follow-up should work in close connection with the director of training and the placement secretary. Possibly the follow-up work and the placement work could be put in charge of the same person, for the follow-up work is emphasized in the fall and winter and the placement work in the spring and summer quarters.

8. What about the cost?

The chief item of cost is the salary of the director or secretary of follow-up service. There will be other costs, however, such as postage, printing and office help. Probably the salaries of the supervisors while in the field should be considered in the budget, but the real value to them, in the experience received, is probably worth all this part of the service costs. As the service area is small, the travel costs are not as great as would be expected. County superintendents are usually glad to make

local trips, and often they entertain the supervisors while they are in their communities.

In conclusion, I should like to emphasize the fact that our experience with the service has shown us that the responsibility of the teachers' college does not end when a graduate signs a contract for her first teaching position. We have come to feel that teacher producing institutions have in the past been far too self-satisfied in feeling "Now the job is hers; our responsibility is over."

The success of the teacher during her first year out of school is much too important—to the individual herself, to her pupils, to the institution from which she has graduated and to education in general—for us to continue a policy of closed eyes and blind hope. Specific jobs in specific numbers demanding specific training, jobs for which a teacher's qualifications must be decided upon before the work is undertaken, naturally require that the institution adjust its organization so as to fill revealed needs and that it assume a post-graduation responsibility for the success of its product.

Assumption of such responsibility does far more than merely help to ensure the success of the novice in her first position. It provides a new, effective and wholesome influence in the organization and work of the institution itself. It brings theorists down to earth by requiring that every course function toward the production of real teachers, and thus the mere aimless offering of courses is eliminated. It necessitates sympathetic, experienced, effective, optimistic instructors in the teacher producing institution. Someone has said that the teachers' college faculty member of the future will need two Ph.D. degrees, one in content and one in training. I would go a step further and say that such a person will need a third degree—one in understanding. Undoubtedly the greatest need of the teacher is understanding. And what a chance to gain understanding in the field, with the novice facing a major problem of life! May the future give us more teachers' college faculties with understanding.

How Texas Is Teaching Fire Prevention

Twenty-eight additional Texas towns have included the teaching of fire prevention as a regular course of study in their public schools since the opening of the present school term, J. W. De Weese, state fire insurance commissioner for Texas, has announced. The total number of public schools in Texas cities and towns in which fire prevention is taught is now 680.

Timely Theme Is Chosen for Meeting of Superintendents

"Education, our guide, and our safeguard, and one of the chief sources of our spiritual life, our cultural growth and our material power"

THE theme around which the program of the Department of Superintendence has been built is "Education, our guide, and our safeguard, and one of the chief sources of our spiritual life, our cultural growth and our material power." Speakers at the various sessions which are to be held in Washington, D. C., February 20 to 25, will base their addresses on some phase of the theme, and the entire program, which has been tentatively completed, promises much of practical and inspirational value.

The convention will be devoted principally to an attempt to save the schools from the breakdown with which they are threatened because of economic conditions. Committees appointed at the Detroit meeting to plan the cooperation of educational, industrial and political leaders of the country expect to bring their work to a close in time to present their plans at the meeting.

An important feature of the convention program will be the honors paid to George Washington on the 200th anniversary of his birth.

Many Trips Are Planned

A review of the convention exhibits by the president and other officers of the Department of Superintendence will be held on Saturday, February 20. The following day will be devoted to pilgrimages to places especially sacred to George Washington and other national leaders. Edwin C. Broome, superintendent of schools, Philadelphia, and president of the Department of Superintendence, will lead a delegation to the Washington Monument, Herbert S. Weet, superintendent of schools, Rochester, N. Y., will head the delegation that visits Old Christ Church, Alexandria, Va., while Norman R. Crozier, superintendent of schools, Dallas, Tex., will conduct a group to the tomb of the Unknown Soldier at Arlington, Va. Those who choose the Lincoln Memorial will be led by George C. Bush, superintendent of schools, South Pasadena, Calif.

Vesper services will be held Sunday afternoon,

with President Broome presiding. The address of the occasion will be given by Rufus B. von Klein-Smid, president, University of Southern California.

The Monday morning program will be devoted to a presentation of the Year Book on Character Education. Speakers will include: A. L. Threlkeld,



Edwin C. Broome, president, Department of Superintendence, National Education Association.

superintendent of schools, Denver, Colo.; Frank N. Freeman, school of education, University of Chicago; Mrs. John K. Norton, associate editor, research division, National Education Association; Charles B. Glenn, superintendent of schools, Birmingham, Ala., and Charles H. Judd, director, school of education, University of Chicago. At the



William John Cooper, United States Commissioner of Education, Washington, D. C.

hour of George Washington's birth, 10:15 o'clock, members in general session assembled in Constitution Hall will rise and give the pledge of allegiance to the Flag, and will sing "America."

A pilgrimage will be made to Mount Vernon on Monday afternoon. President Broome will place a wreath upon the tomb of George Washington and Florence Hale, president, National Education Association, will pay the same tribute at Martha Washington's tomb. Special ceremonies will also be held on the colonial porch of the mansion.

Enriching Adult Life

A convocation of George Washington University, Washington, D. C., will be held on Monday evening, with Cloyd Heck Marvin, president of the university, in the chair. The National Commission on the Enrichment of Adult Life, through its chairman, James A. Moyer, Massachusetts State Department of Education, Boston, will present its report. School planning and construction will also be discussed under the leadership of Elmer T. Peterson, college of education, University of Iowa. Allied departments and organizations will also meet at this time.

The theme of the program Tuesday morning is: "The present crisis and public education." The presiding officer will be Norman R. Crozier. President Broome will speak on "The Crisis Defined."

What the public is getting and may expect from adequate expenditures for education will be discussed by George D. Strayer, professor of educational administration, Teachers College, Columbia University. "How Shall the Crisis Be Met?" is the subject of the talk to be given by David E. Weglein, superintendent of schools, Baltimore, Md., and chairman of the committee on school costs. Russell Dearmont, Missouri state senator, Cape Girardeau, Mo., will discourse on "Improved Methods of Financing Education." The report of the committee on financing educational research will be presented at this time, and the nomination of officers of the department for the coming year will take place.

Meetings of administrative groups arranged according to the size of city will be held on Tuesday afternoon as well as meetings of departments and allied organizations.

"American education—past, present and future," will be discussed on Tuesday evening. From the past to the present will be reviewed by Francis G. Blair, state superintendent of public instruction for Illinois, Springfield; American education to-day will be discussed by Frank P. Graves, state commissioner of education for New York, Albany, while future needs and prospects will be predicted by Henry Suzzallo, director, Carnegie Foundation for the Advancement of Teaching, New York City.



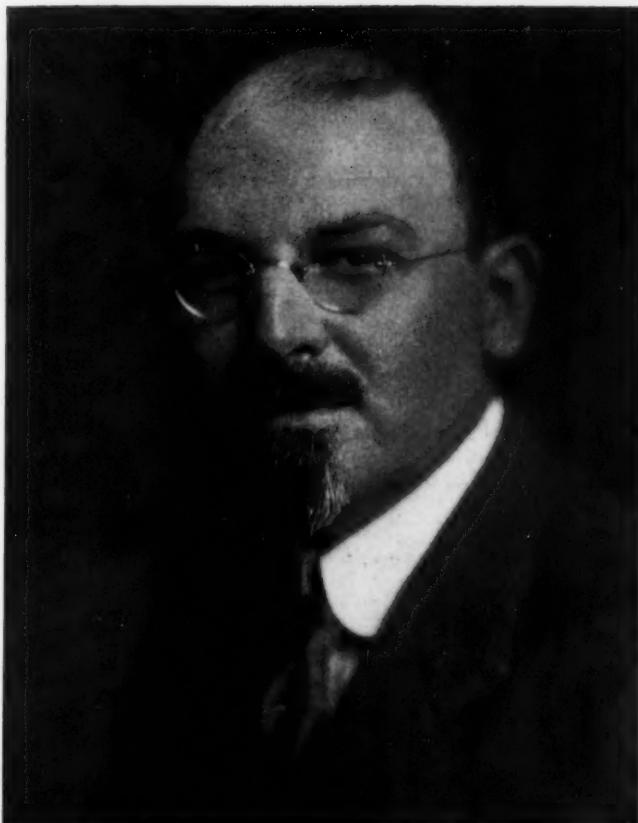
Sherwood D. Shankland, executive secretary of the Department of Superintendence.

Wednesday morning will be devoted to a discussion of education as a source of our spiritual life and cultural growth. Florence Hale, president, National Education Association, will speak on "Intangible Values"; Lorado Taft, sculptor, Chicago, on "Art in Education"; Walter Damrosch, music director, New York City, on "Music in Education," and John H. Finley, of the *New York Times*, on "Literature in Education."

A business session will be held at which the following committee reports will be presented: lay relations, by Charles S. Meek, superintendent of schools, Toledo, Ohio, and audit, by Louis Nusbaum, associate superintendent of schools, Philadelphia.

Rotarians to Hold Luncheon Meeting

The School Masters' Rotary Club will have a joint luncheon with the Washington Rotary Club at noon on Wednesday. The organization is composed of Rotarians with classification "Education" from every section of the United States. The attendance at these meetings is generally from 800 to 1,000. This will be the fifteenth annual luncheon of this organization. These meetings are usually addressed by a man of national prominence, and are looked forward to by Rotarians as one of the high spots of the convention. Arthur M. Hyde, Secretary of Agriculture, will be



F. W. Ballou, superintendent of schools, Washington, D. C.

the principal speaker this year. Joseph M. Gwinn, superintendent of schools, San Francisco, is president, and S. T. Neveln, superintendent of schools, Austin, Minn., is secretary-treasurer. The price of the luncheon is \$1.25 a plate. Reservations for the luncheon may be made by mailing a check to the secretary, and tickets will be mailed. Tickets may also be obtained at the desk at registration headquarters.

Discussion groups arranged according to subjects will be held in the afternoon and in the evening the delegates will attend college dinners and pay tribute to their various alma maters.

Mark Sullivan to Address Meeting

The theme for the Wednesday evening meeting will be: "Education for a changing social, economic and political world." A feature of this program will be a speech by Mark Sullivan, famous editor and author of Washington, D. C.

The Thursday morning session will be featured by addresses by Ray Lyman Wilbur, secretary, Department of the Interior, whose subject is "Education as a National Enterprise," and Robert Maynard Hutchins, president, University of Chicago. At the business session which will follow, Paul C. Stetson, superintendent of schools, Indianapolis, will present the report of the committee on resolutions.



Norman R. Crozier, superintendent of schools, Dallas, Texas.

"Promoting the physical and mental health of school children," is the theme to be discussed on Thursday afternoon. Willis A. Sutton, superintendent of schools, Atlanta, Ga., will be the presiding officer. The subject will be discussed in the following phases: through physical preparation of the preschool child; through approved courses of study; through properly directed medical inspection and follow-up work; through well organized recreational programs. Speakers will include: Frederick W. Maroney, director of health education, Atlantic City, N. J., Jay B. Nash, associate professor of physical education, school of education, New York University, New York City.



Charles H. Judd, director, school of education, University of Chicago.

The newly elected officers will be introduced at this meeting.

Other recognition of the 200th anniversary of George Washington's birth includes a historic pageant which will be presented on Thursday evening in honor of the visiting superintendents. The director of the pageant is Percy Jewett Burrell, who presented the Pageant of Time to the Department of Superintendence at its Atlantic City meeting.

The National Conference on Student Participation in School will also meet on Thursday. Frank A. Rexford, director of civics, New York City Public Schools, will preside. Speakers are

the Hon. Ruth Bryan Owen, member of Congress, Dr. Harold G. Campbell, deputy and associate superintendent, New York City Public Schools, and William McAndrew. Eight high school pupils will tell about a plan of successful student participation in his particular high school. The pupils who will appear on the program are: John W. Robb, McKinley High School, Washington, D. C.; Muriel Drummond, Newton High School, New York City, and Howard B. Tompkins, Erasmus Hall High School; Gilbert Ogg, O'Keefe Junior High School, Atlanta, Ga.; Charles Skuce, Langley High School, Pittsburgh; Corinne Feibleman, Wiley High School, Terre Haute, Ind.; Ben H. Brown, Central High School, Memphis, Tenn.; Fred Koehler, Central High School, Evansville, Ind.

Departments and allied organizations that have been invited to participate in the activities of the Department of Superintendence week are:

American Educational Research Association; Department of Elementary School Principals; Department of Rural Education; Department of Secondary School Principals; Department of Supervisors and Directors of Instruction; Department of Vocational Education; Municipal Normal School and Teachers College Section; National Association of Deans of Women; National Association of High School Inspectors and Supervisors; National Council of Childhood Education; National Council of Education; National Council of State Superintendents and Commissioners of Education; National Society for the Study of Education; National Society of College Teachers of Education.

Railroads Give Generous Cooperation

Special railroad rates are assured—one and one half fare for the round trip. Identification certificates may be had by writing to J. W. Crabtree, secretary, National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C., or to the state director or state secretary. Those who neglect to get their identification certificates in advance and who purchase a round trip ticket will not be able to obtain an adjustment of their fare after they arrive in Washington. The sale of tickets begins in the Eastern territory on February 14, the final return limit being thirty days from the date of the sale. Validation may be obtained at the regular ticket offices in Washington.

Sleeping room reservations are being handled by the Washington Convention Bureau, Augustus Gumpert, director, 1730 H Street, N. W., Washington, D. C. Convention headquarters, the registration offices, the post office and the exhibits are to be located in the Washington Auditorium.

List of Exhibitors at Washington Meeting

A

	Booth No.
Albert Teachers' Agency.....	30
Allyn and Bacon.....	301-302
American Child Health Association.....	306
American Crayon Co.	90
American Education Press, Inc.	259-260
American Federation of Organizations for the Hard of Hearing.....	362
American Home Economics Association.....	361
American Medical Association	271
American School Publishing Corp.	28
American Seating Co.	266-267-268-269-277-278-279-280
Appleton & Co., D.	294
Arlo Publishing Co.	295
Art Extension Press, Inc.	26
Atwater Kent Mfg. Co.	219-220
Automatic Pencil Sharpener Co.	309

B

Babb & Co., Inc.	37
Balfour Co., L. G.	207
Barnes & Noble, Inc.	357
Barrett Automatic Keyless Lock Co.	369
Bausch & Lomb Optical Co.	283
Beck Duplicator Co.	16
Beckley-Cardy Co.	214
Bell & Howell Co.	110
Binney & Smith Co.	39
Blakiston's Son & Co., Inc., P.	223
Bobbs-Merrill Co.	233
Bookhouse for Children	215
Bowling Green Business University	9
Boys & Girls Square Deal Club.	359
Bradley Co., Milton	235
Bruce Publishing Co.	270
Buckingham Co., Inc., C. O.	310
Burroughs Adding Machine Co.	102

C

Camp Fire Girls, Inc.	14
Caproni & Bro., Inc., P. P.	288
Carter Bloxonend Flooring Co.	62
Chicago Apparatus Co.	79-80
Chicago Gymnasium Equipment Co.	59
Chicago Hardware Foundry Co.	52
Childhood Education	314
Children's Flower Mission	213
Christian Science Monitor	25
Civic Education Service	312
Clarin Mfg. Co.	6
Classroom Teacher, Inc.	217-218
Cleanliness Institute	226
Colgate-Palmolive-Peet Co.	34
Columbian Test Service	259-260
Columbia School Supply Co.	111
Compton & Co., F. E.	201-202-203

	Booth No.
Continental Car-Na-Var Corp.	88
Corbin Cabinet Lock Co.	109

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Da-Lite Screen Co., Inc.	364
Denoyer-Geppert Co.	107-108-253
Derby Co., P.	45-46-47
Deskor Chair Sales Corp.	372
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Dodge Brothers Corp.	20
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Gaylord Bros., Inc.	55-56
Giant Mfg. Co.	50
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Hale, Cushman & Flint, Inc.	316
Hall & McCreary Co.	1
Harcourt, Brace & Co.	48
Hart & Hutchinson Co.	68
Harter Publishing Co.	38
Heyer Duplicator Co., Inc.	8
Heywood-Wakefield Co.	242-243-248-249
Hild Floor Machine Co.	351
Hillyard Chemical Co.	354-355
Hinds, Hayden & Eldredge, Inc.	365
Holden Patent Book Cover Co.	96
Holmes Co., Warren S.	89

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Inter-Collegiate Press	363	Quarrie & Co., W. F.	256
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		RCA Photophone, Inc.	284-285-286-287
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Kent Co., Inc.	43	RCA Victor Co., Inc.	264
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Keystone View Co.	97-98	Remington-Rand, Inc.	221-222
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National Association for the Study of the Platoon or Work-Study-Play School Organization	51	South-Western Publishing Co.	92
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National School Equipment Co.	40		
National Theatre Supply Co.	125-126-127	T	
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Owen Publishing Co., F. A.	106	Universal Publishing Syndicate	24
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A School Building Unit and How It Simplifies Construction

Building by the unit method is here shown to be an economy measure and an undoubted aid to achieving flexibility in the modern schoolhouse

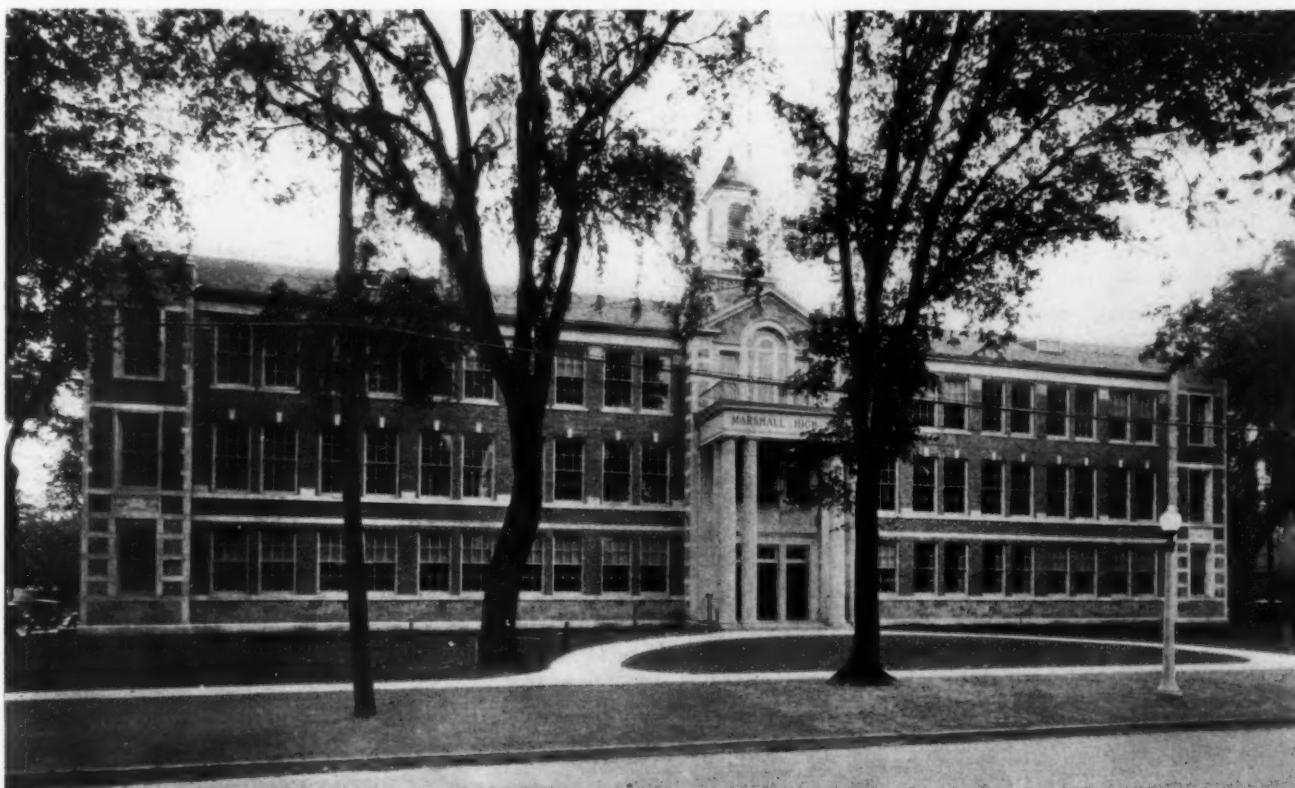
By ARTHUR R. SHIGLEY, Department of Educational Engineering, Warren S. Holmes Company, Architects, Lansing, Mich.

ORGANIZED and systematic methods of assembling the structural elements of school buildings are definite and material factors in lowering costs. System in every line of effort brings greater efficiency and therefore decreased expense. This principle, however, is rarely applied to school construction.

While the layman in his ignorance of the inside problems of architectural service may accustom himself to thinking that doors, windows, blackboards, vents, ducts, electric outlets, chemistry hoods, bookcases, radiators and the hundred other necessities of classrooms, shape themselves into

well arranged locations, those engaged in school planning well know the endless amount of trial and error, fitting and conniving that harass the average designer. If he succeeds, even awkwardly, in getting all the requisites into one room, more than likely the orientation of the adjoining room or some other factor disarranges the whole plan and an entirely new arrangement becomes necessary. Unfortunately, the planning of the ordinary school building is a disorganized and un-systematic procedure.

No one realizes this more than the contractor. At best, every building is something of a tailor-



The new high school at Marshall, Mich., was constructed on the standardized unit plan.

made affair. It is an assembling of different materials by workmen who never before did that particular job. It is quite different from the manufacturing of the millionth automobile, into which the habits and skills utilized in making all those preceding it contribute towards its rapid and machinelike delivery.

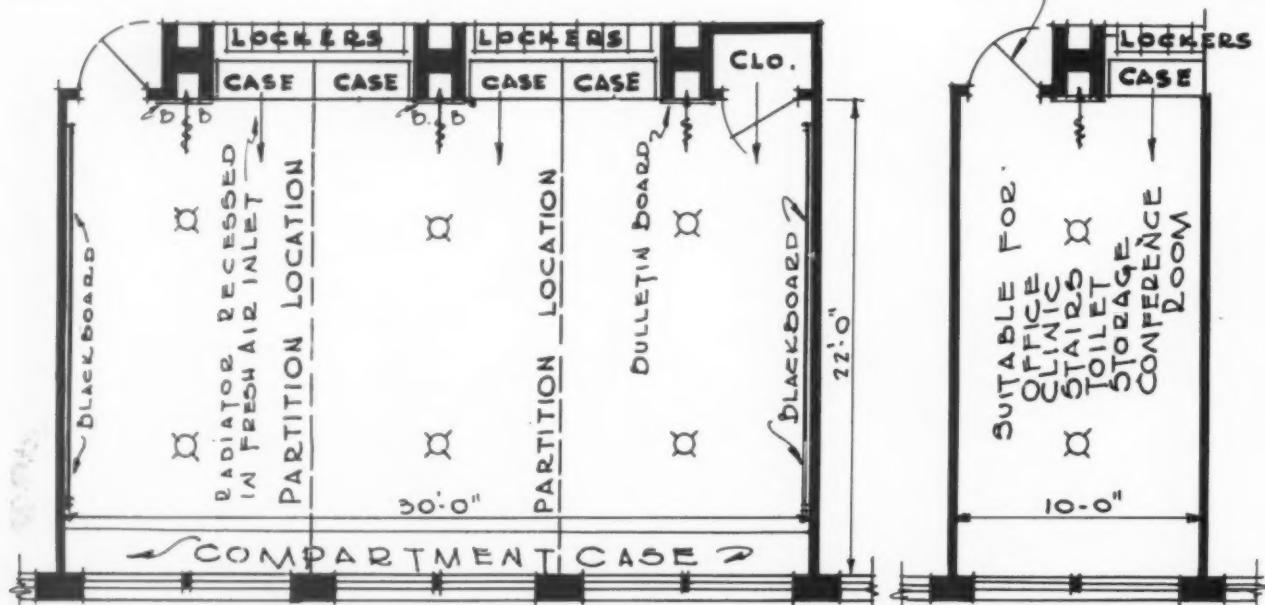
Can any of this organization be employed by the architect to the advantage of the owner and the contractor and is there a way to assemble in an orderly fashion the elements of construction of a school building?

This is being effectually accomplished to-day through the adoption of what is known as the unit method of construction. By the unit method is meant the selection of a building unit suitable in size, large enough to contain heating, ventilating and lighting elements, and small enough to be adapted either singly or in multiple to the various sized rooms likely to be incorporated in an efficient building plan.

An illustration will help to make the point clear. The most advantageous unit for an elementary school is a rectangular solid 10 by 22 by 12 feet. This may be visualized as a small room 10 feet wide, 22 feet from window to corridor wall and 12 feet high. One can easily imagine a group of these solids arranged side by side on either side of a corridor forming, singly, toilet rooms, offices, stairways and storerooms. In pairs they form

suitably sized small classrooms, clinics and teachers' rooms, and taken three at a time they form the standard size classroom, 30 by 22 feet. It is obvious that a unit of any other size would not meet all these requirements. For example, a 15-foot unit is too large. If used singly it would be grossly wasteful of space either as a stairway or as a toilet. A smaller unit would be similarly inefficient in that if used either singly or in multiple it would provide usable space only here and there. The 10-foot unit is the most efficient common denominator that can be used in elementary school construction.

Moreover, there are structural reasons for adopting a 10-foot unit. It is large enough so that supporting brick and cement piers, windows, lintels, door recesses and filing cases can be readily adapted to it. Each unit is provided with the required amount of steam radiation and the required number of fresh air ducts, foul air vents, artificial light fixtures and natural light, and in each unit these fundamental requirements are similarly placed. Steam piping, returns, traps, valves, radiators, electric outlets, framing plan, door recess, lockers, closet space—all fit into the same relative position. Plumbers, steam fitters and electricians repeat their work over and over



TYPICAL -3- UNIT CLASS RM. 22'-0" x 30'-0"
SHOWING POSITIONS WHERE PARTITIONS MAY
BE RE-LOCATED MAINTAINING HEATING LIGHTING
AND VENTILATING IN PROPER BALANCE
NO STRUCTURAL OR MECHANICAL
INSTALLATION INTERFERES WITH EITHER
PARTITIONS OR FUTURE DOOR.

THE TYPICAL
BUILDING UNIT
NO LOST SPACE
IN DOOR RECESSES
OR IN CORRIDOR
WALLS



This classroom is an excellent example of the three-unit plan of construction.

again in the same operations. A \$150,000 building has approximately fifty of these units where window frames, door frames, trim and bulletin boards are assembled in the same fashion. Each is exactly like the other. Partitions are placed at only the junction points where they are needed, and doors are cut through to corridors only when necessary.

A serious stretch of the imagination is not required to estimate the relatively large savings achieved by boards of education who thus systematize and standardize their work. Much of the cement form work is duplicated over and over again. Grounds, nailing strips, reenforcing rods, conduits, steam pipes and returns—not apparent to the observer in a finished building, yet essential to its strength and utility—are all systematically provided for. Much of the trim, heating vents and other parts may be assembled in the mill or foundry and shipped in a partly completed form. If this is done labor expense is much less than if all the assembling and finishing are done on "the job."

In addition to being economical, unit construction renders a building thoroughly flexible. Since each unit contains the required radiation, lighting and other facilities, partitions may be placed at

junction points and may be omitted or removed entirely without altering the balance or the proportion in heating, illumination or ventilation or without interfering with any mechanical or structural arrangement. To render a building flexible, it is not only necessary to free partitions from load carrying, as is almost universally practiced, but to reckon with all the factors enumerated. Only rarely does the architect take the trouble to systematize this phase of his work.

Although a 10-foot unit is clearly the economical and educationally desirable one for elementary schools, it is highly debatable whether it is acceptable for high schools. Here seating arrangements are different, equipment in vocational rooms is bulky and the rooms generally vary in size. For two-pupil tables and chairs a 10-foot unit with three units to the ordinary classroom fits the average class. For tablet arm chairs or pedestal desks a 13-foot unit, two units to the ordinary classroom making it 22 by 26 feet, is desirable. Probably the most satisfactory solution for high school building is to use different sized units in the same structure, placing the various rooms in such a way that maximum efficiency is thereby achieved.

To select the most efficient building unit and

then to perfect its details, first, so that it articulates with its adjoining unit, and second, so that each reenforcement rod, nailing strip, electric conduit and steam pipe is conveniently and economically placed, is a distinct contribution to the building trade and, consequently, to the cause of good school building. In fact, the perfection of these units is now being carried to a fine point as the arrangement has proved its value.

How the Unit Plan Aids Building

The smallness of the unit renders it open to almost microscopic inspection. Any change improving its structure automatically improves the entire building. Instead of thinning itself out over a bulky cubage, the focus of attention is directed at a specific point. The window sill, for example, has always been a problem, and its height, structure and width are questions of debate and of regulation by statute. Through research and study of the unit, a glazed window sill was designed, of the proper width for plants and flowers, which would be unharmed by water seeping through plant boxes or through open windows, would add color to the room and would never need paint or varnish. Soundproof partitions, proper thickness of corridor walls to accommodate lockers and filing materials and a door recess to prevent blocking of corridors when doors are swung open are features that give some indication of the scientific approach that the building unit has made to the subject of school building.

Careful testing for strength, durability and light reflection has weeded out undesirable building materials. With constant constructive criticism from architects, designers, structural and mechanical engineers and superintendents of construction, from the time the unit is inked on linen through all stages of construction, a high standard of efficiency has been developed.

The study of the unit resulted in a method of building a supporting pier in a corridor wall of such a shape that it formed the vent duct from the classroom and actually reduced the number of square feet of floor area occupied by the corridor wall from 30 to 18, which is an economy of 40 per cent on this item alone.

Further research applied to this building unit led to convenient arrangements for children's wraps, a teachers' closet of ample size yet including no waste space, and an efficient plan of recessing steel lockers in corridors without widening the corridors. To be able to open classroom doors without obstructing the passage through the corridors at the very moment of their greatest use was imperative. This advantage was brought about by the study of the unit. A method of

building in chemistry hoods, tray cases, magazine and exhibit cases and bookcases so that they would not occupy classroom space was an additional problem that was successfully solved. In fact, perfection of the building unit to its present advanced stage has not only added an inestimable degree of efficiency to every building in which it has been employed, but has saved hundreds of thousands of dollars by economies of assembly and space.

Standardizing school construction has decided advantages. The use of a building unit of proper size makes standardization effective. Uniformity of shape and arrangement of radiators results in lower cost. Much of the detailed assembly work done on the job may be completed in the factory. The same is true for window cases, sash, doors, sheet metal work and a hundred other items. Contractors become familiar with the building unit, for it obviously aids them in making estimates on a job. Quantities are more easily taken off and sizes more certain. Moreover, standardization results in a more accurate and a better detailed set of working drawings. Contractors are more certain of their bids and hence are less liable to include contingency items.

Although the average layman is unaware of the studies made in this phase of progress in school building, those engaged in the building trades recognize its importance. Contractors are eager to accept its advantages and through competition, pass them on to the owners. Comparative figures kept in one city building department reveal that through organized and systematic construction savings with the unit plan amount to as much as 10 per cent. Unfortunately, only the progressive architect has capitalized its advantages and conserved for the owners the proportionate savings involved.

Purchase of Music Texts Subject of Injunction in California

A temporary injunction has been issued by the superior court in Sacramento, Calif., against the California State Board of Education and the superintendent of public instruction, restraining them from purchasing state music texts from an Eastern publishing firm instead of having them printed in the state printing office.

The petitioner was J. L. R. Marsh, secretary of the Federated Trades Council, who alleged that the purchase of the books from a private firm is "in contravention to public policy" and that such purchase would be illegal because the law requires the use of uniform texts.

Choosing and Placing the School's Cafeteria Equipment

Every detail of planning and equipping the lunchroom and the kitchen should be carefully studied from all angles; nothing should be installed unless the utmost in service is first assured

By HOWARD L. BRIGGS, Director of Vocational Education, and CONSTANCE C. HART, Supervisor of Lunchrooms, Board of Education, Cleveland

THAT efficient workers are necessary to the success of the school cafeteria is an established fact. These workers, however, are of little significance if the kitchen and counter equipment is inadequate.

Since labor is costly, special care must be given to the consideration of the cafeteria equipment, which should become a labor saving investment and thus result in lowered production costs. Not only may costs be reduced, but the possibilities

of improving the quality of both food and service by modern devices must be considered.

The thermostatically controlled electric food containers are a typical example of modern devices for improving the quality of cafeteria food. For more rapid service there are the rapid change-making machines. Increased production is possible not only as a result of machine equipment, which will do the work more rapidly than human hands, but it may also result from the



Metal counters, cabinets and steam table covers are part of the up-to-date equipment in the cafeteria at the Nathan Hale Junior High School, Cleveland.

careful planning of the layout of the kitchen so that steps are fewer and time is conserved.

The average cafeteria kitchen must be large enough to keep workers out of each other's way and to make travel from unit station to unit station or from unit station to counter, rapid and uninterrupted. At the same time, it must be small enough to keep distances at a minimum, and so arranged that all lost motion and steps are eliminated. Other elements besides the time saving factors in the placing of equipment are: sources of light; the angle of lighting; the availability of gas, water, electrical and drain outlets; flues; delivery entrances and ventilation.

Placing the Equipment

In planning the placing of equipment, specialized service units should be considered first. The baker's table, the potato peeler, the vegetable cutter, the salad table, the pastry table, the cook's table, the pot rack, the ranges, the dishwasher, the silver sink, the stock kettle and the potato bins all have a definite function and must be placed in close relationship to other units through which the food preparations involved must pass.

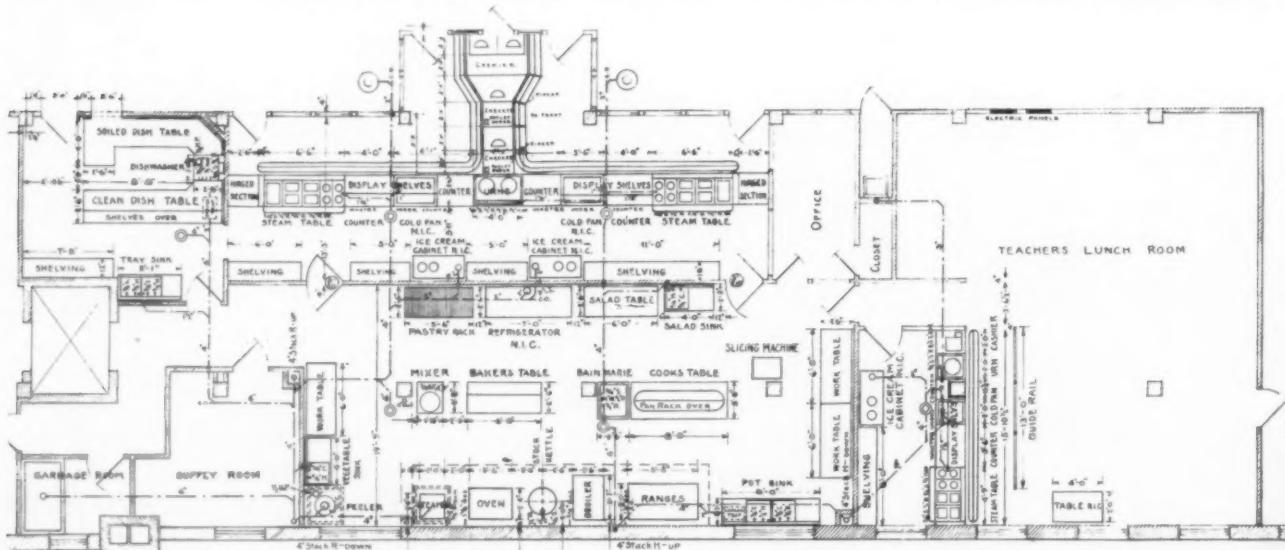
Next must be considered what may be designated as multiple service equipment, such as mixers, steamers, refrigerators, storage rooms, bake ovens, vegetable and pot sinks, incinerators, tables, bains-marie and slicers. These units must be placed at points convenient to other unit stations, since they must be utilized for a number of types of work.

The mixer is a good illustration. The salad maker may utilize the mixer for dressings. The pastry cook finds it invaluable for cakes, whips and fillings. The vegetable cook may mash the potatoes in it. The meat cook may make purées

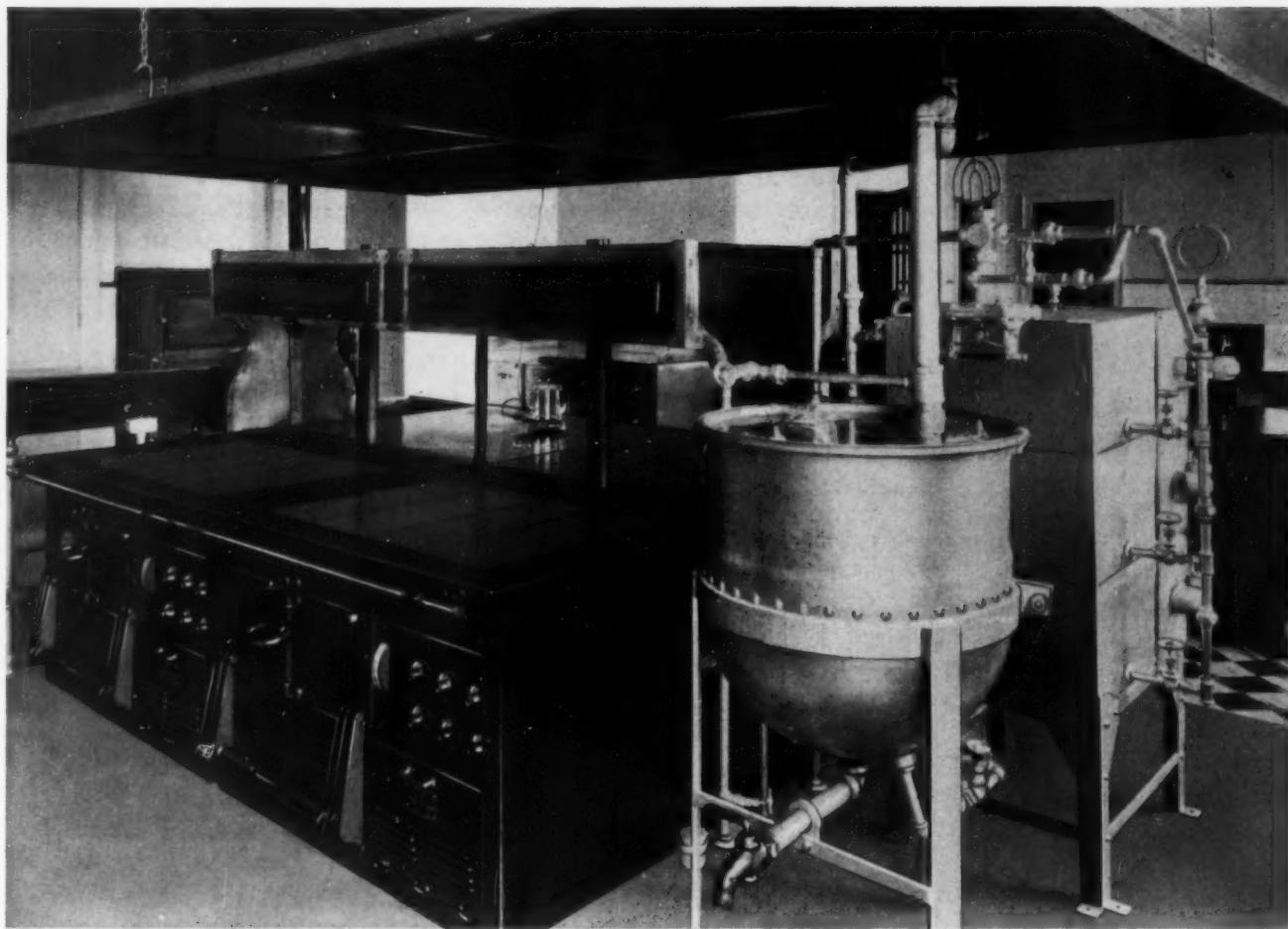
and the bindings for her gravies, or she may combine her mixtures for hash, hamburg or meat loaves. Economies in the installation of such equipment as this may be made only through the scheduling of its uses; otherwise duplications of the same unit are necessary. Mayonnaise dressing should be scheduled in the afternoon, so that the machine may be released for the pastry cook in the morning. Furthermore, the mixer must be free during the noon hour for the cook's use in mashing potatoes. In the interim, the meat cook utilizes it to advantage.

In an article as brief as this, it is impossible to describe in detail all the units of school cafeteria equipment. A layout of a typical average school cafeteria is included with the name of each necessary item. In the selection of equipment, both wearing qualities and service requirements must be considered. The price, too, is an item. It is not our purpose in this article to recommend any specific makes, for there are many well constructed units which are accepted by the commercial trade and which through many years of service have proved their durability and fitness.

One of the problems to be considered in installing new equipment is that of refrigeration. The capacity of the refrigerator units must be based upon the quantity of food to be prepared and the nature of the service. Will it be advantageous to buy perishables day by day, or to provide refrigerated storage space for large purchases? The shape and the arrangement of the storage shelves are items that require careful thought. Insulation and construction are important elements. Last but not least, what will be the source of refrigeration? Will ice or mechanical refrigeration be used? Not only must there be considered the refrigerator of the kitchen proper, but also the cold



This floor plan illustrates a typical layout for the kitchen and lunchroom equipment that will efficiently serve both pupils and teachers.



These electric ranges are sanitary and ensure uniform cooking and baking. The steam stockpot and steamer at the right are conveniently placed.

pan, the storage closets under the counter, the ice cream cabinets and all the other units that require refrigeration. If electric refrigeration is used, will there be individual compressor units at each station or will there be one centralized unit? If so, what system will be used?

Again, there is the problem of heat in the installation of stoves, steamers, steam tables and bake ovens. It has been a practice for many years to utilize gas for ranges, ovens, urns and even for the heating of steam tables. Gradually steam has come into use for urns, dishwashers, steam tables, bains-marie, stock pots, soup kettles and steam cookers. If steam is used, what will be its source? If it comes from the main boilers of the building, the cafeteria may be faced with the problem of having no heat during the spring and fall periods. In some cases, auxiliary gas burners may be installed under the steam tables and dishwashers and urns. There are on the market to-day steam cookers with direct gas steam generators as a part of the equipment itself. A further question is one of having a steam generating unit in a school heating plant, which may be kept continually operating for lunchroom use exclusively.

Sometimes such units are installed in the lunchroom.

Of recent years electrical heating equipment has been perfected to a point where it is highly efficient. Thorough insulation of electric ovens and improved heating elements lower current consumption and confine the heat to the oven, thus assuring a cool kitchen. Uniform temperatures ensure better products, and modern enclosed heating units result in sanitary cooking compartments. Electric ranges are equally satisfactory. The question of gas *versus* electricity for cooking and baking is a question that must be considered in the light of local current costs and gas costs, plus money available for the original installation. Recent experiments have been made with gas ovens insulated in a manner similar to the modern electric oven. Electrical equipment for cooking and baking assures positive heat control for all cooking services and compartments as well as uniformity in heat distribution.

Another important problem is the construction of kitchen equipment. It must be sturdy, sanitary and efficiently planned. For tables, sinks and drainboards we have found some of the recently

perfected stainless metals to be highly satisfactory, since they are free from seams and are not subject to warping and corrosion. They are both sanitary and durable. Costs of such materials have constantly decreased, due to increased demand and to improved manufacturing methods. In a consideration of the design, careful thought must be given to heights, lengths and widths, to drawer and shelf space, to overhead racks and underneath shelves, to finish, fabrication, gauge of metal and workmanship. The cost of maintenance must be considered. Ease of cleaning is an item. When mechanisms are involved, are they easily reached, oiled and repaired?

Questions That Must Be Answered

Even the matter of lunchroom floors is a definite problem. Shall they be of tile, rubber inlay, linoleum, cement, wood block, hardwood or composition? They should be verminproof, which means that there should be no cracks or crevices. They should be durable, since repairs cause delays and are costly. They should be waterproof, and should not be too hard on the feet of the workers who stand or walk the entire working day. The baseboard should be curved so that no corners exist between the floor and wall for the collection of dirt. The question of soundproofing is another important item.

Careful studies of the methods of installation are important. Too short an exhaust pipe on a steam kettle causes the metal hood over the cooking equipment to condense and drip water upon the ranges. Such difficulties should be anticipated in considering the original plans. Careful specifications should be developed covering all standard equipment for cafeteria installations. A study of the following typical specification indicates the detail into which this study may be carried:

"One (1) cook's table with pan rack above. Table shall be 8' 0" long and 3' 0" wide.

"Top shall be made of No. 10 U. S. Std. gauge stainless steel, turned down one and one-half inches (1½") on all sides with all corners welded and polished smooth.

"There shall be two (2) stainless steel drawers under top 24"x24"x5" deep with corners solder filleted to one-quarter inch (1/4") radius.

"Table top shall be supported by one and one-quarter-inch (1¼") wrought iron pipe legs with four-inch (4") flange connecting with top flurred or flanged type of adjustable feet.

"All rails and fittings shall be of one and one-quarter-inch (1¼") wrought iron pipe and malleable fittings. Supports and rails shall be retinned.

"This table shall have one (1) shelf of No. 14

U. S. Std. gauge stainless steel, twelve inches (12") above the floor and supported on the cross rails. No longitudinal or objectionable cross seams shall be made in fabricating this shelf or the table top."

A number of other items must be given consideration. Is the manager's office so located that she can prepare her reports, transact telephone business and at the same time supervise what is going on in the kitchen? Glass windows are a necessity.

Is the storeroom convenient to the delivery entrance, and, if the cafeteria is on an upper floor, is the elevator exit immediately adjacent to the storeroom proper, and can deliveries be made to the elevator from the delivery door without too much costly trucking? Are there an adequate number of shelves in the storeroom? Are the heights and depths ideal for the standard goods they must house? Are they easily accessible for the workers? Is the storeroom placed so that the manager can keep her eye on its contents? Can it readily be cleaned? Is it well ventilated and is it too hot or too cold for the preservation of foods?

Is adequate lavatory and locker equipment provided for the employees, and is it necessary for them to leave the lunchroom entirely to utilize a distant lavatory?

Is incinerator service provided? Is it in the kitchen or in the basement? Is the incinerator dump door enclosed in a separate room so that escaping odors will not penetrate the kitchen? Is it conveniently located? Is the floor provided with drains so that the garbage containers may be washed after emptying, and will the incinerator selected incinerate?

Are slop sinks provided, and are they convenient to the kitchen so that the cleaning women will not have too many steps to take?

Is the dishwashing room so situated that the dirty dishes may be entered without interfering with the lunchroom lines and the clean dishes conveyed to the counter proper without too much trucking?

First Make Your Plans Carefully

All of these questions must be weighed carefully, and kitchen blue prints should be revised a sufficient number of times to guarantee that these problems are satisfactorily solved on paper. It is too late and too costly to make changes after buildings are completed.

The total equipment should be in definite proportion to the size of the school and of the service to be rendered. Is the service strictly a cafeteria one, or is a tea room to be operated for the teach-

ers? Is the serving of food to be carried on during a brief period when large volumes of food must be instantly available, or is it an all-day service?

Too much equipment is in the way; not enough retards efficiency. Yet, provision must be made for anticipated growth. It is too late to enlarge a building after the equipment is once installed.

Another important unit is the service counter.

of the public school cafeteria is the serving of nourishing and healthful foods. It is logical, therefore, that the steam table come first and the desserts last. The choice between single and double line counters must be determined by the predicted number to be served.

The design of the counter is extremely important. Much consideration must be given to the relative spaces allotted to the cold pan, the urns,



Trays and silver are conveniently arranged on this sanitary all-metal counter.

The problem of the public school is rapid service. This means that the lines must have ample room to form and move continuously from the first station to the cashier, and from there to the lunchroom proper without interference. The arrangement must be such that the counters are never empty, and food must be served quickly over the counter top to the waiting tray. Since desserts are more profitable, they are offered first in the average commercial cafeteria, and hot foods are presented further down the line. The objective

the steam table, the bread and rolls and the tray and silver sections. To illustrate, the ratio of desserts sold to the steam table sales must be determined so that the proper space may be allotted to each.

It may be necessary to have a teachers' counter. In this case, the ratio of service units may vary from that of the pupils. The teachers will probably consume a greater proportion of salads per capita. A coffee urn is required for the teachers' counter, and cocoa urns are used for the pupils'.

There must be adequate provisions for the trays and silver.

In designing the steam table, it is desirable that adequate covers be provided for the various pans and that they be so designed that they may be stacked in the minimum space. Extra pans of identical sizes must be provided so that the kitchen may prepare and have in readiness fresh and attractive food as the pans are emptied.

Cold pans should be so arranged that an attractive display may be presented. Adequate drainage should be provided if they are packed with ice, and they should not be too close to either the urns or the steam tables.

Sufficient service space should be provided so that the counter help may rapidly pass food from the counter to the purchasers. Service shelves should be provided with the proper width for either display or the temporary storing of surplus services. The width and number of shelves must be considered. They must be sturdily constructed, and so arranged that pupils do not get their sleeves in the food on display.

Storage facilities for extra services should be provided under the counter. In some cases these should be refrigerated, and in other cases they should be heated. Careless designing may cause the steam pipe to the urn to run against the sides of the salad storage. Pipes at the rear of the counter may interfere with the proper utilization of the storage space for food and plates. Small defects cause considerable inconvenience and the slowing up of service.

Space should be allowed behind the counter for the free passing of help, and at the rear wall storage space should be provided for china and other necessary equipment. The placing of the ice cream service should be considered. Should it

height of the rack right for the average pupil and for moving the plates over the counter to the trays?

Are auxiliary cold counters desirable? Some children bring their lunches, which are supplemented with a bottle of milk, a sandwich or a light dessert. Some may desire to return to the counter for an additional dessert or a bar of chocolate. In large schools the so-called cold counters economize on regular counter operators, since purchases of one or two items will not tie up the longer lines.

Illustrations in this article indicate the type of counters that have been found to work out satisfactorily in practice.

There are other types of counter service, however. There is the food station counter where desserts, hot foods and beverages are each restricted to a definite counter, the purchaser going only to those units purveying the particular items he desires.

There is a hollow square type of counter without rails where purchasers may go from any one section to any other section without remaining in line. There is also a closed square type of counter where food may be purchased from all sides.

The problem of the open *versus* the closed kitchen again presents itself. In some installations the kitchen, counter and lunchroom proper are all in one large room. Another plan is to have the kitchen and counter separated from the lunchroom proper by a partition, or the counter may be within the lunchroom proper and separated from the kitchen by a partition.

The kitchen, the servery and the lunchroom proper should each be separated by partitions. The odors of cooking food are not always appetizing. The confusion of passing pupils detracts

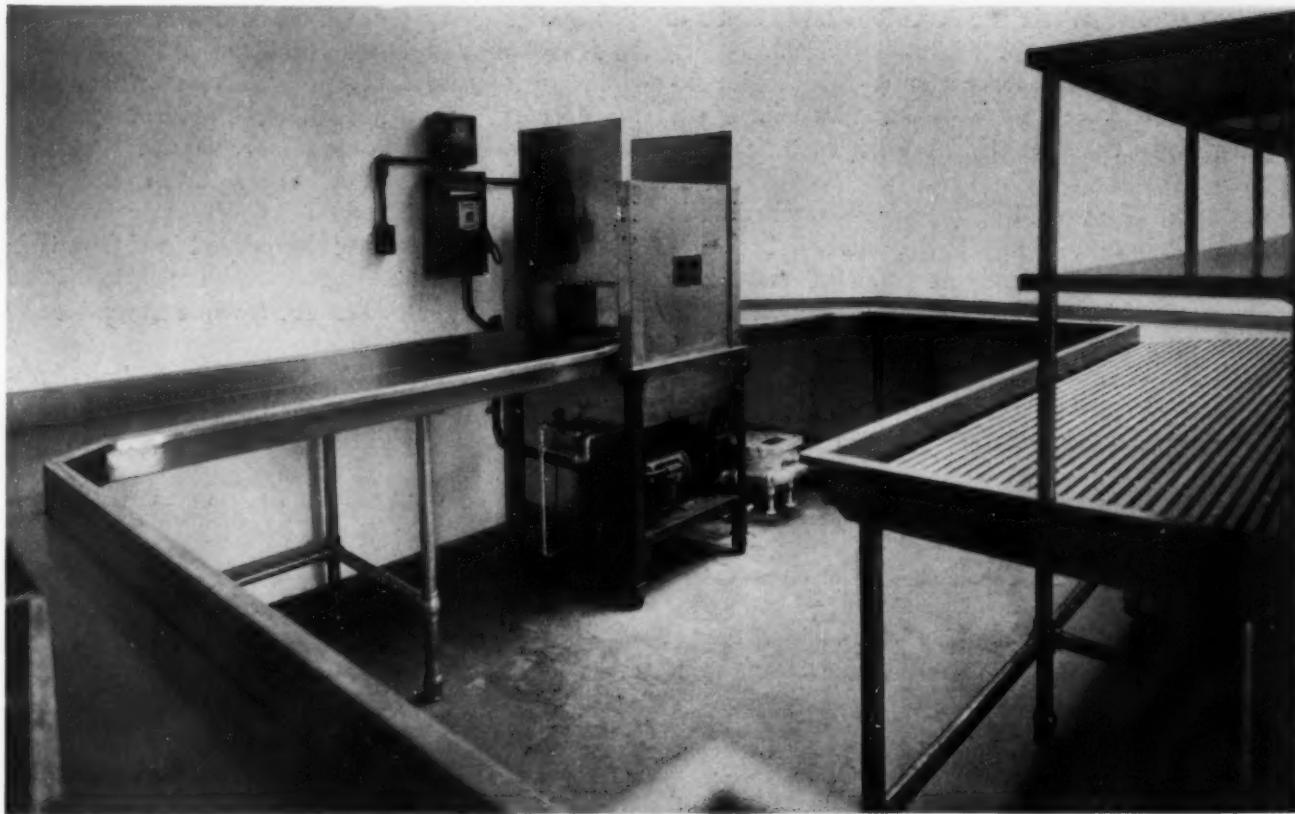
TYPICAL SPECIFICATION SHEET FOR THE PURCHASE OF CHINA

	500 or less	500 to 1,000	1,000 to 1,500	1,500 to 2,000	2,000 to 2,500	2,500 to 3,000
Fruit Saucers 5"	140	192	288	396	516	1,080
Oatmeal Nappies 5 $\frac{3}{4}$ "	96	108	180	240	300	420
Plates 8"	180	216	336	552	720	840
Plates 6 $\frac{1}{4}$ "	180	216	408	792	1,192	1,488
Teacups	96	120	144	204	264	360
Teasaucers	96	120	144	204	264	360

be installed in the counter proper or should the ice cream cabinet be placed at the rear?

The counter construction—its height and the materials used—is important. Shall it be of stainless steel, composition glass, wood, tile or marble? The design of the tray rack is significant. Does it allow easy travel of the trays, and if there are turns, does it provide for easy transit? Is the

attention of the worker from his job in the kitchen and, since it is becoming a custom to use the lunchroom proper for study halls, it is desirable that the counter be entirely separated from that unit, for pupils cannot study to advantage to the accompaniment of the noise that necessarily results from preparing the counter for the noon luncheon or for the subsequent clean-up.



Soiled dishes pass from the lunchroom through this dishwashing machine to the drying racks at the right.

The methods utilized to collect cash receipts are again significant. In Cleveland, and in many other systems, the continuous line is used. The pupil, after placing the desired food units upon his tray, passes a cashier who totals the cost and issues a cash register receipt from a cash register. The pupil, in turn, pays the cost to the cashier at the next station in the line. With double counters it should be so arranged that two checkers and two cashiers, or one checker and two cashiers, or one checker and one cashier may be used. Since the number going through the lines varies at different periods, with smaller lines it is possible for one checker to issue checks to two different lines at the same time, thus economizing on labor. If the traffic is light, one cashier can handle two lines.

In the hollow square type of service the individual must pass the cashier and checker before leaving the room.

In some school systems metal checks or tickets are sold to the pupils. These are either returned to the cashier or directly to the station from which the food is purchased. This is frequently true in the case of the food station arrangement. In some cases the pupil pays cash for each item as he purchases it.

Cash registers are almost necessary. They may be hand operated or electrically driven. They should be rapid in action, and their maintenance cost is a real consideration. Machines may be

purchased which will add totals. A good checker usually works faster by mental addition, ringing up the total only. Change-making machines are convenient. Menu boards should be attractively placed so that they may be easily read and quickly changed.

What shall be the size of the lunchroom itself? It must be based not only upon the number to be served but upon whether or not there is to be one service per day or the pupils are to come through several periods. If the room is to be used for a study hall, other factors must be considered. Soundproof treatment of the ceiling is desirable, particularly for study hall purposes. Is the counter to be closed off by a solid partition or a glass partition?

The types of tables are again important. Are they of convenient size to be used both for study and lunch purposes? Are they of a size that can be economically arranged according to the shape of the room? Are they both attractive and long wearing? Can they be easily cleaned? Of recent years some disappearing tables have been marketed which can be folded up in the wall if it is desired to use the lunchroom for gymnasium, entertainment or other purposes. The fire code must be considered in making table arrangements, so that adequate aisle space is provided.

Shall chairs or benches be used? If chairs are used, should they be high backed or low backed?

The low chair back is a convenient unit, since it is more conveniently handled and stored.

The question of floor material for the lunchroom proper should be considered, which again depends upon the uses to which the room is to be put.

The small equipment of the school lunchroom is a most important item. In the kitchen the durability of equipment and the types of service to be rendered must be considered. Kitchenware may be purchased in aluminum, steel, stainless steel, china, glass, nickel, copper, enamel, wood, tin, silver, earthenware, iron and wireware. Aluminum is recommended due to its lightness. Stainless steel is coming into use rapidly. It is durable and less porous than some other metals. Nickel pots are sometimes used for the making of hollandaise sauce, since they are noncorrosive. Copper kettles may be used for preserving. They are sometimes plated on the inside with nickel. Enamelware which is more durable than it was formerly is now manufactured. Earthenware is breakable and heavy, and its use is more generally confined to crocks, jars and other containers.

For counter service, we have plates and other miscellaneous vitrified china. None but the best should be purchased, since china is subjected to hard usage by the pupils and by the help. Furthermore, first-grade china is so carefully sorted for shape that it will stack firmly. Lower grades of china will not do this, and consequently many dishes are smashed. With the exception of the cups and saucers, china should be of the "hotel round edge" construction, since it is desirable that the rim be reinforced. It is important that the china be standard for the entire lunchroom system and that the variations in the sizes be limited. Not only is this a saving in cost, but the sorting of dishes requires labor, and money may be saved by limiting the variety of sizes and shapes. Carefully prepared standard specifications based on the numbers to be served are necessary.

Choosing Silverware and Trays

Silverware should be of the most sturdy construction. We specify that all silver be heavily plated, and that the forks and spoons have an overlay plate on the wearing parts. Here is a typical specification for forks:

"Heavy bright finish. To be stamped 'Cleveland B. of E. Lunchrooms' on top of handle."

"Dessert Forks: Conventional pattern, flat handle, with a total length of 7" and a base metal consisting of 18 per cent nickel silver, properly proportioned and finished. They shall be plated with not less than 4 ozs. of pure silver per gross. The weight shall not be less than 15 lbs. avoirdupois

per gross. They shall have standard finish and be free from roughness and other imperfections."

Trays may be obtained in aluminum, stainless steel, enamel, papier-maché or plastic material.

The trays of plastic material are sanitary, lighter, attractive and freer from noise in handling.

Aluminum trays are long-lived and light in weight. Recent improvements have developed a coating which eliminates for a while at least their tendency to smudge.

Recently stainless steel trays have been produced, which are sturdier than aluminum and which retain their natural brightness indefinitely if polished.

Enamel trays, which may be obtained in many attractive finishes, are available, but, like all enamelware under heavy use, they are subject to chipping and rusting.

Without doubt the equipment problem is one of the greatest technical difficulties in the establishing of a successful school lunchroom. Experience alone will give a full solution to the requirements inherent to any particular situation. It is our recommendation that any school system that is establishing lunchrooms for the first time seek the advice of those experienced in this field before making any extensive investment. Much help can be obtained from equipment manufacturers.

Correspondence Courses Are Popular in Many Public High Schools

The use of supervised correspondence courses in small high schools is gaining considerable attention in various parts of the United States, according to the Office of Education. As a result, pupils are being offered hundreds of courses which could not otherwise be made available.

In addition to supplementing the regular work offered in the small high school, the variety of correspondence courses provides a specialized and high grade type of instruction, despite the limitation of a small teaching staff. Such courses also make possible a better adjustment of studies to individual pupil needs.

Supervised correspondence courses are offered by local high schools which make a contract with a reputable correspondence school, state or university extension service. The local school secures the lessons, provides periods in the regular school day for study, supervises the pupils' work, and returns the lessons to the correspondence study center for a report on pupil accomplishment. The local school board pays for the correspondence courses pursued.

The High School of the Hill Town —A Test in Planning

While an uneven site offers difficulties to the architect, it also offers to him a challenge to make the most of such difficulties and to transform them into possibilities

By JOHN LEONARD HAMILTON, Hamilton, Fellows and Nedved, Architects, Chicago

TRANSPORTATION and accessibility have been the all-important factors in the location and development of our modern American cities, while defense and inaccessibility were often the dominant factors in the building of the cities of feudal Europe. As a consequence, the "Hill Town" as it is known in Italy, with all of its picturesque architecture, its romance and legend has no counterpart in the United States.

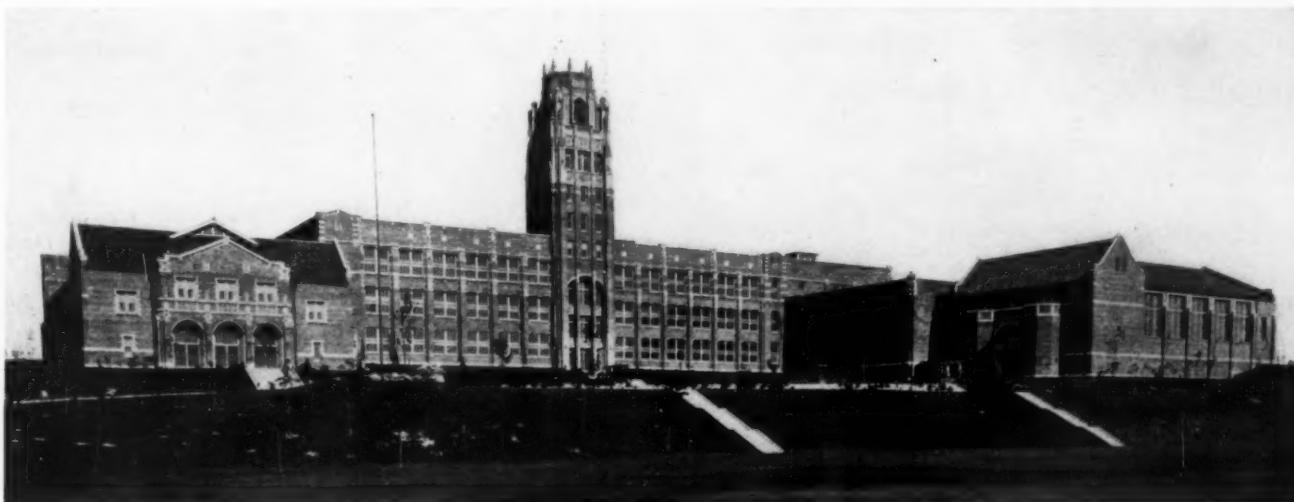
Not all of our cities, however, are on level ground, and some of them, notably the river towns on the Mississippi and its tributaries, are often built on areas of uneven contour. Most of these cities were founded before the era of railroad development, when river transportation was ascendant. Their sites were selected probably with a view toward security from damage by floods as well as for commercially strategic reasons, and their development has presented to architects and engineers many interesting problems arising from the uneven surface of the land.

As a rule, our cities have available within them suitable land for school sites on ground approx-

imately level or with only small differences in elevation, and it does not often happen that a board of education and its advisers are confronted with the problem of utilizing as a high school site land having differences in level of a hundred feet or more in an area of twenty acres.

When such a site is on a broad hillside, having a more or less uniform slope in one direction, its utilization is not difficult to visualize, but where the only sites available are furrowed violently and irregularly with ravines or moraines, and no approximately smooth or level area exists in any part, the outlook to those accustomed to working with level sites is perplexing to say the least. The type of problem, therefore, demands a kind of study that must go far deeper than a mere consideration of apportioning the ground surface to the various demands of a modern high school.

It is evident from the outset that the problems of drainage and grading are fundamental and their cost may be so great as to be out of all proportion to the cost of the land itself. Then, too, it soon becomes apparent that the acreage re-



Lincoln High School, Manitowoc, Wis., is an interesting example of a school built on a hill site.

quired on such a site will be 20 to 30 per cent more than that necessary for the same facilities on a level site.

A site that can be graded to meet requirements by a purely local operation of cutting here and filling there, entirely within the site itself, is more economical to improve than one that demands for proper grading the complete removal of a large amount of earth which must be hauled away, or which requires for the filling of low spots a large amount of earth brought in from outside sources. In this connection it must be borne in mind that building foundations cannot safely be placed on filled ground.

How One Hill Site Was Adapted

It is also evident that careful study may reveal the fact that positive advantages in both beauty and utility may be had with the hill site which are not afforded by a level site. The Lincoln High School, Manitowoc, Wis., is an outstanding illustration of the results that may be obtained on a hill site by a thorough study and a logical plan based on natural land characteristics. This site was originally twenty-two acres of undulating sand dunes overlooking Lake Michigan, with a maximum variation in level of about forty-five feet. Skillful landscape gardening has greatly enhanced the result.

In the consideration of any high school site, orientation, of course, plays an important part, both as to sunlight for the building and the relation of the building to its surrounding territory.

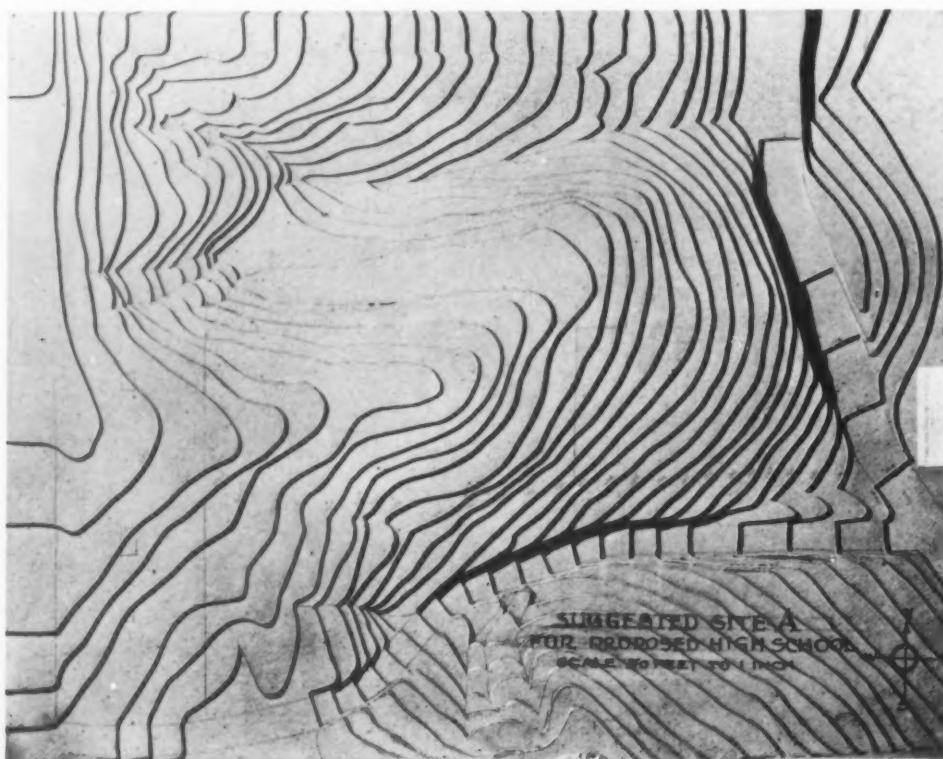
We normally wish to front the building toward the most important direction of approach. We also like to place it on the highest part of the site and to obtain east and west lighting as far as possible. Considering the rough terrain in question, these desires may be in conflict and therefore impossible to reconcile without compromise.

A problem of this character confronted the board of education of a Middle Western river town whom I was called upon to advise. Upon my arrival I was shown maps of the city and driven over the entire district. I found that the present high school was not an old building but a rather pompous structure built on a small lot on one of the main streets and no longer capable of meeting its requirements.

The superintendent and the members of the board were quite conscious of the errors of the past and the difficulties of the future. After a careful examination of the entire district, it appeared that there were only two areas of sufficient acreage and accessibility for a high school site that were not already occupied by other buildings of value.

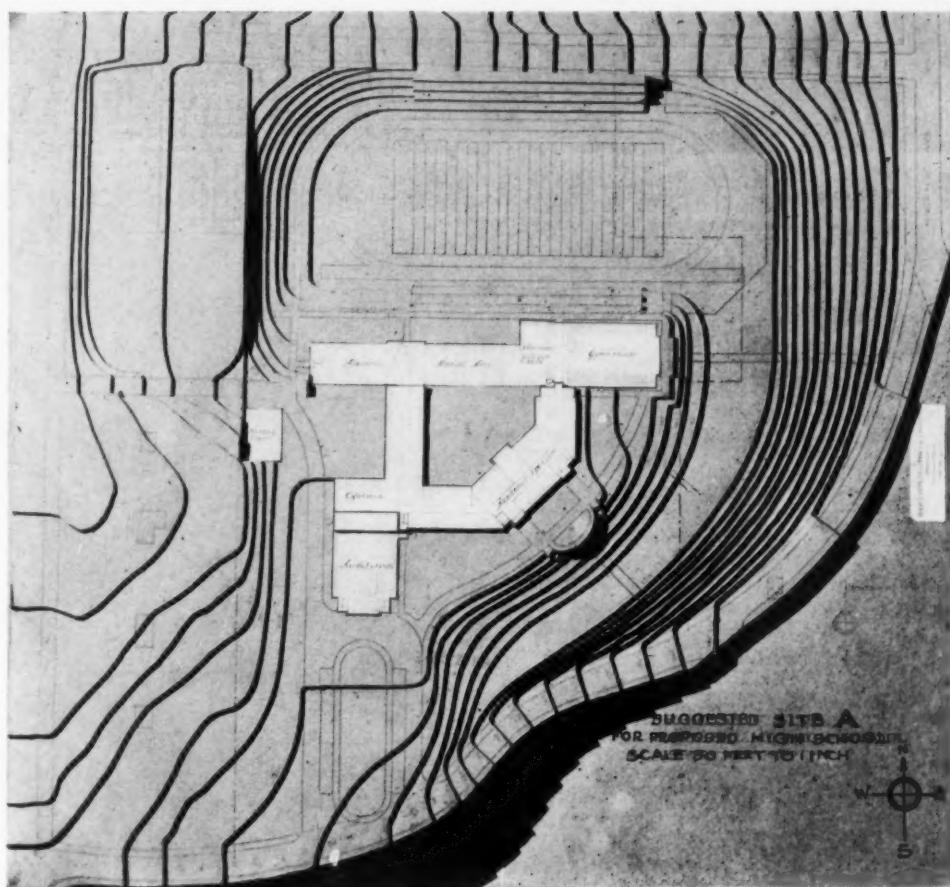
Both of these pieces of land were so peculiar in surface that a comprehensive view of them from any place on the ground was not possible. An airplane view would have helped materially. Such buildings as existed on these sites were few and of little value.

It was apparent, after a conference with the board, that the answers to their pertinent questions lay in a thorough visualization of existing



A relief model of a proposed site for a new school. This gives a relief picture of the site as it would appear if formed with terrace walls five feet high on each contour of the map. The character of the surfaces is more plainly evident with such a model than with one formed with actual slopes.

The model on the opposite page was studied as a possible site for the school and the plan shown here designed. To obtain large level areas, it was found necessary to have steep grading of other parts. This was found possible, however, and the site was regraded by a relocation of 135,000 cubic yards of earth.



facts rather than in any statement of opinion however authoritative. Accordingly, the city engineer was called upon to supply contour maps of the areas in question. Now, a contour map may be both a work of art and a fine example of engineering, but at least to the layman's eye it is far from being a "picture" of the ground it describes.

Accurate relief models were, therefore, prepared by the architects on a scale of 50 feet to 1 inch, using a layer of pulp board one-tenth of an inch thick for each five-foot contour. This gave relief pictures not of the natural ground slopes but of the sites as they would appear if formed with terrace walls five feet high on each contour of the map. The actual character of the surfaces is more plainly evident with such a model than with one formed with the actual slopes.

Site A in the accompanying illustration is a piece of ground of $21\frac{1}{2}$ acres, the lowest portion of which is 155 feet lower than the highest level.

Site B is a piece of ground of 11.7 acres, with a difference of 75 feet between the lowest and highest levels. A small creek runs through the property.

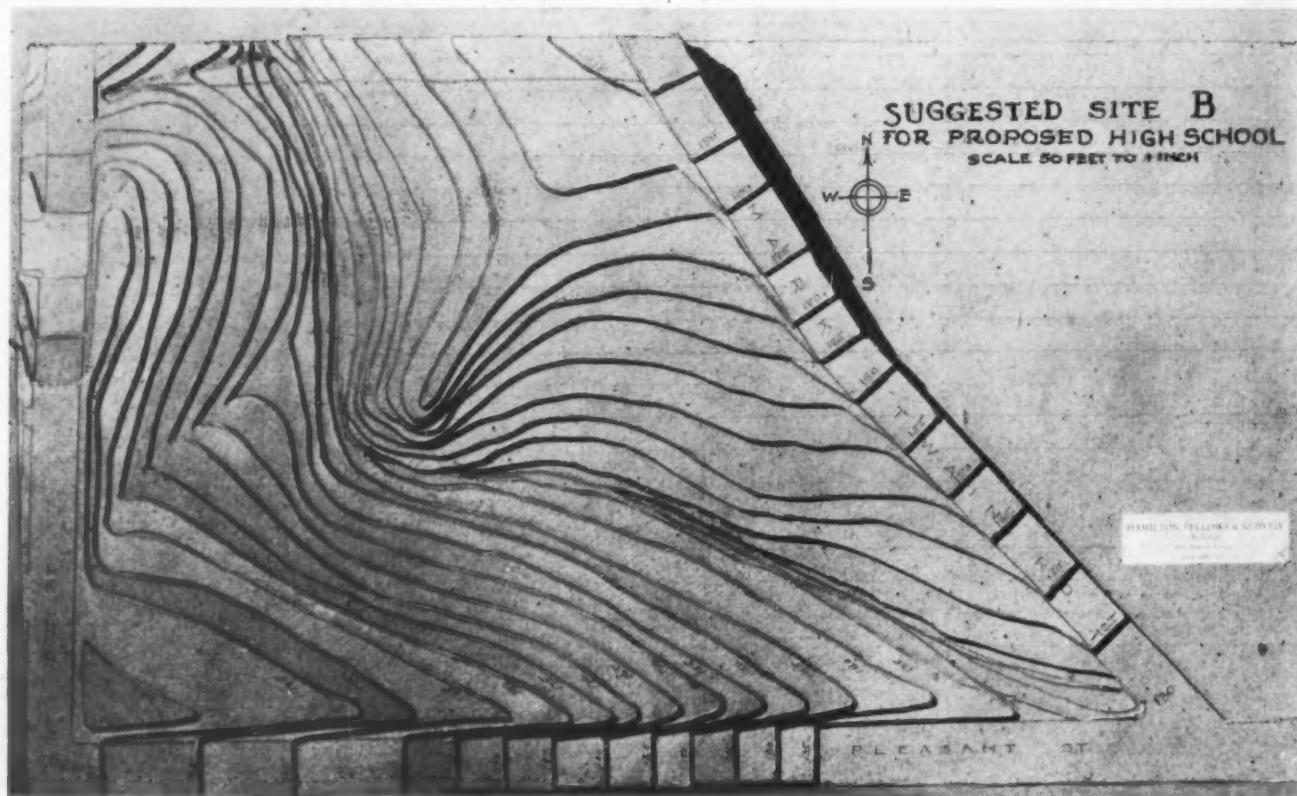
With these models as a basis of study, "airplane views" from every angle were easily obtained, and the possibilities of each site readily suggested.

Designs were then made for a large high school plant on each site, and every possible advantage

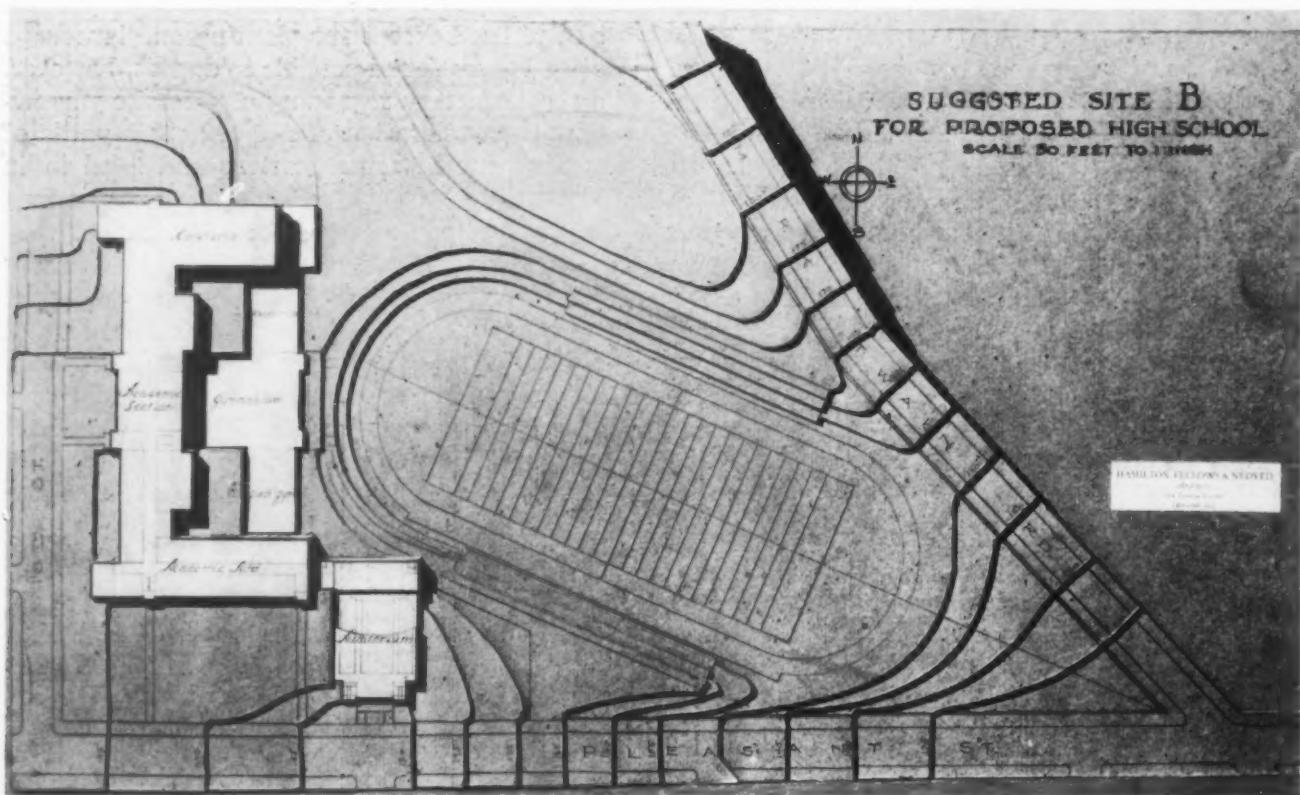
was taken of the conditions presented, to the end that all of the land should be utilized to the fullest extent. On Site A, it was evident that in order to obtain large level areas, other parts would have to be so steeply graded or terraced that they could not be utilized except for planting and landscape effects. It was found possible to do this, however, and a satisfactory regrading of this site was arranged by a relocation of 135,000 cubic yards of earth cut out in some portions and filled in in others.

Difficulties Presented by Site B

With Site B a different condition was presented. In order to utilize this site, it was found to be necessary to lead the water of the creek through a concrete storm sewer. Also, a total excavation of 52,000 yards and a total fill of 124,000 yards were found to be required, necessitating the bringing to the site 72,000 yards of filling from outside sources. It was found, also, that portions of the building foundations on Site B would entail a large abnormal expense for excess depth. As a result of this study Site A was recommended as being more adequate in its accommodations and more adaptable to requirements. Although the cost of Site A was greater than that of Site B, it was estimated that the excess cost of preparing Site B would more than offset that advantage. Site



These relief models show the second site considered and how it was adapted. Here rerouting a creek through a storm sewer and a total excavation of 52,000 yards and a fill of 124,000 yards were found necessary. Portions of the foundation would have required an abnormal expense for excess depth. Hence, Site A was recommended. Though the initial cost of Site A was greater, the excess cost of preparing the second site would more than offset the advantages.



A was therefore recommended to those planning the school.

The study of these two sites with their very unusual peculiarities involved the visualization of building types of a character quite different from accepted standards. Provision had to be made for building in progressive stages as the institution grew and as money became available. The immediate requirements were for 1,000 pupils but expansion to 2,000 was anticipated.

The building suggested on Site A is of an unsymmetrical shape which conforms to the roughly triangular shape of the part of that site selected for the buildings. Certain sections of this building are designed to be placed at a level one story lower than the main section.

The building suggested for Site B has two frontages of equal importance—the classroom section and main entrance on the west, and the gymnasiums, placed on a grade two stories lower, on the east and fronting the athletic field.

In both instances, by taking advantage of natural formations of land, it was found possible and economical to place the athletic field in a low area with the bleachers on sloping ground surrounding it.

While the hill site presents many problems in high school planning and is undoubtedly more expensive to improve than the level site, if full advantage can be taken of its characteristics a finer result may be attained.

What 6,000 Instructors Think About School Motion Pictures

Motion pictures in primary and secondary education afford chiefly, among other advantages, an increased interest in school work and a sustained interest in the topics studied, a greater desire and ability to discuss subjects, and a contribution to life experiences difficult and often impossible to obtain by any other method, it was found as a result of a detailed and comprehensive survey recently completed by the motion picture division, Department of Commerce, under the direction of E. I. Way, chief, industrial and education section.

Mr. Way, in making public the results of the study, stated that the survey was one of the most comprehensive ever made of the subject. Questionnaires were submitted and detailed reports received from nearly 6,000 teachers in 517 representative public school units.

Practically 89 per cent of the teachers responding to the survey stated that motion pictures are "very helpful," or "helpful," and on the basis of the response "it seems safe to conclude," the re-

port declares, "that all the advantages cited in the questionnaire can be served by motion pictures."

Other advantages cited to which favorable responses were given include a quickened originality and a larger participation in project work and other self-activities; an increase in the quantity and an improvement in the quality of the material which they read; a marked improvement in range and accuracy of vocabulary; an ability to concentrate mental activities, to think more accurately, and to reason more soundly; a clearer appreciation of the richness, accuracy and meaningfulness of personal experience; a greater facility in correlating features of their lessons with community conditions.

Social and Natural Sciences Popular

Out of 44,186 showings covered by the survey, 73 per cent were reported to have been given in connection with curricular activities and 27 per cent with extra-curricular. The subject in which films played the largest part was social science, 40 per cent of the showings having been in connection with this field. The second most popular subject was natural science, represented by 26 per cent of the showings.

Five other subject fields, physical education, manual and industrial arts, home economics, English and commercial subjects, represent about 25 per cent of the total. Other subjects have a negligible distribution.

As to the financing of motion pictures for the school, nine different methods are in use, 48.51 per cent by boards of education, 17.32 through revenue from entertainment, 16.63 by use of school funds, 6.16 through contributions, 4.33 through extra-curricular activities, 2.73 through parent-teacher associations, 2.27 through the assessment of a laboratory fee, 1.37 through "any possible manner" and 0.68 by local business men.

The reply "any possible manner" is indicative of the difficulty of financing visual education.

With reference to the cost of films to schools, it was found that, using 280 schools as a basis of calculation, 22.5 per cent pay an average rental of \$3 or more for each showing. These may, however, have included "superspecials" presented as entertainment features or for the purpose of raising money. The next most frequent cost was from \$1 to \$1.50, which 17 per cent paid. It is probable that the films costing \$1.50 and less were really distributed free, as the only cost involved was that of transportation. If this supposition is correct, 48 per cent of the films were distributed free. Ninety-eight per cent of the schools reported that they had not purchased their films outright.

Editorials

Utilizing School Property to Its Maximum Capacity

FIVE years ago a certain large high school building was used to about 65 per cent of its capacity, from 8:30 a.m. to 4:30 p.m. five days a week. Some time was lost at noon, since many of the pupils went home for luncheon. This same high school building is now used to over 90 per cent of its capacity, from 8 a.m. to 10 p.m., with the exception of two hours around dinner time. The building is filled five evenings every week with classes for adults and for continuation pupils. The auditorium is used several evenings every week, especially on Friday and Saturday, by parent-teacher associations, and other organizations.

Five years ago there began to be complaints of overcrowding in this building. The superintendent of schools and the principal of the high school set to work to show in a chart just how every bit of space in the building was used throughout the day. They found that there was a good deal of waste space from 8:30 a.m. to 4:30 p.m. They worked out a program so that all the space, including the auditorium, would be used every period during the school day. That program is in effect now. Many more pupils are being accommodated in the high school to-day than were accommodated five years ago, so that it has not been necessary to erect a new high school building yet. The principal and teachers of the high school have been asked whether they think the congestion is interfering with good work. The teachers are almost generally of the opinion that there is no greater overcrowding now than there appeared to be five years ago.

The study made by the superintendent and the principal led to the opening up of the high school building for continuation and adult classes until ten o'clock in the evening. Also, more generous use is being made of the auditorium now than was made of it five years ago. During this period of five years, there has been a marked change of attitude of the board of education toward the use of public property. Every community and neighborhood organization is now invited to make use of the school plant. The only restriction put upon the use of the property by community and neighborhood groups is that there shall be no interference with the regular school pro-

gram and that any organization using school buildings shall be responsible for their protection. The superintendent will not grant the use of school property to any group unless at least two responsible members will become financially responsible for the safeguarding of school property. As the program is working out, one never hears of any complaint of the careless treatment of school property.

Two propositions relating to the matter in hand can be made without any qualification. One is, that sound education of the younger generation will be promoted rather than interfered with if school property is generally used by the adult population. Adults who are using a school building and its equipment rather frequently will have a better understanding of what a modern school is trying to accomplish than will adults who remain aloof from the school, and they will be readier to furnish adequate facilities in order that school work may be made efficient. In the second place, there must be elimination of waste in the use of school buildings and school equipment. Any school building used to only 60 per cent of its capacity from 8:30 a.m. to 4:30 p.m. five days a week, is a poor investment. Industrial establishments find it necessary to use their property practically to 100 per cent of capacity for twenty-four hours a day, six days and in some cases seven days a week. An industrial establishment that did not make greater use of its buildings and equipment than some of the schools do of their buildings and appliances would go into bankruptcy. If there were some way to determine the earning capacity of school buildings and their equipment, it might become apparent that in many communities the educational plant is a wasteful investment.

The country is alive to the necessity of being more efficient than we have heretofore been in the use of school property, for the benefit of the public, not only the younger but also the older generation. The efficient use of buildings and equipment does not require the adoption of the platoon or any other similar system, but the work-study-play plan does make it possible to put to continual use all the space and equipment in school buildings. There is available now a great deal of literature in which it is shown how the efficient use of school buildings and equipment has been increased as much as 30 or 40 per cent by the adoption of the platoon or a similar plan. When the idea of making the school the community center is combined with the work-study-play plan, school property can be made to return good interest in the form of community benefits on the original investment.

One thing is certain, communities cannot go on building schools, churches, hospitals, recreation centers, parks and museums, *ad infinitum*. Since

we are committed to education above every other community enterprise, we must make school buildings and their equipment usable to 100 per cent of their capacity if possible, not only for the education of the younger generation but for the education also of pupils who have left school and of adults and for the carrying on of community business and recreation of every kind.

Saving the Eyesight of School Children

A CONSERVATIVE student of education has pointed out that the eye is used to-day by most Americans at least three times as much as it was used by their forefathers. What he means is that we rely upon the eye to-day for the acquisition of knowledge vastly more than we did three or four decades ago. We read several times as much in newspapers, magazines and books as our forefathers did. The printing press is playing a tremendous rôle in modern civilization. Consequently conservation of eyesight is of far greater importance than it was formerly.

We are aware of this and we are making commendable efforts now to save pupils in the schools from undue eyestrain. The work that is being carried forward by the National Society for the Prevention of Blindness is of incalculable importance. Fortunately, persons of means are contributing to the work of this society so generously that investigations on eyesight are being carried forward and suggestions are being made for the alleviation of eyestrain and the prevention of blindness. Information of ways and means of conducting school work so as not to overtax the eyes of school children is being distributed widely and in such form that teachers, parents and laymen can appreciate the necessity of safeguarding children's eyesight.

The work of the national society in the prevention of blindness and eyestrain is not confined to the schools; but those who are engaged in educational work should be chiefly interested in the findings of the society and in its recommendations, because practically all the children in America are in school, starting with the nursery school and extending through the secondary school.

Columbia University in cooperation with the National Society for the Prevention of Blindness, is soon to enter upon an intensive investigation of eyestrain in schools. There has never been an adequate investigation of the causes of eyestrain among children nor have practical methods of relief been found. It is proposed now to study

every aspect of school lighting, seating arrangements and printed materials from the standpoint of relieving eyestrain. It is hoped that this investigation will enable us to answer definitely such questions as: "How much reading should children of different ages do each day?" "What size and style of type and quality of paper cause the least fatigue among school children?" "At what age should children be required to undertake work demanding close use of the eyes?" "What quality and intensity of lighting are best adapted for different kinds of eye work in school?"

The first step in the investigation will be a survey of the actual situation in the schools. Then will follow experimentation to determine the optimum conditions for eye work in education, with a view to conserving eyesight and reducing eyestrain.

Greek Letter Fraternities in Public High Schools

EARLY in 1931 the Michigan Supreme Court handed down a decision affecting Greek letter secret societies in the high schools of the state.

The legislature of Michigan had enacted a law prohibiting pupils in public high schools from organizing or becoming members of Greek letter fraternities. In defiance of the law, pupils in one of the high schools of Lansing became members of a fraternity, whereupon the city board of education denied them credits for the studies they had completed. The high school boys petitioned for a writ of mandamus to compel the board of education to issue the credits they had earned. The lower court denied the petition and the case was then appealed to the supreme court.

The decision of the supreme court is of great significance. Other states are considering bills designed to restrict or entirely prohibit Greek letter fraternities in state supported high schools. The Michigan decision holds that the state has the authority to regulate public institutions and the behavior of pupils in them to the extent of prohibiting school fraternities or secret societies of any sort, and denying credits to pupils who are enrolled in such organizations.

Three of the justices of the Michigan court took exception to the decision of the majority, holding that the state goes beyond its legitimate sphere of state regulation when it attempts to prescribe certain social activities or prohibit them even if they are thought to operate as an obstruction to education and are harmful to public wel-

fare. The three dissenting judges maintain that if the state can restrict pupils in public high schools from joining Greek letter societies, then it can prohibit them from joining the Knights of Columbus, the Masons, the Odd Fellows or any other secret organization. The five judges who concurred in the decision held that the state does not contribute to the maintenance of any secret societies outside of educational institutions and that, therefore, Greek letter fraternities in high schools are not to be compared with secret societies outside of public educational institutions.

The sentiment of educators generally throughout the country is on the side of the five justices of the Supreme Court of Michigan, who hold that secret societies in high schools are harmful to the educational work of the schools and that they should be prohibited by law. It seems probable that other states will enact similar laws.

Usually parents of pupils who belong to these social fraternities are more eager than the pupils themselves to have the fraternities retained in public high schools. Membership in an exclusive Greek letter society is thought by some parents to be of social advantage. Certain parents discover that their children, if left to themselves in the high school, will select companions who are not in the same social caste as their parents in the community. As a matter of fact, pupils do not readily stratify in public high schools along the lines of community social stratification, and foolish parents worry because their children fail to maintain the social position they themselves have attained.

The leading national fraternities and sororities are standing against Greek letter societies in high schools. Some of them at any rate are going so far as to refuse to accept into membership in a Greek letter society in college or university, any student who was a member of a Greek letter society in a secondary school. This seems to be rather harsh and rigorous but it will have a wholesome effect upon the social life of public high schools.

It is not intended to say here that high school pupils will not form groups or cliques according to their varied interests and neighborhood connections. But in schools in which school organizations are formed for the purpose of promoting the social life of all the pupils, with the result that every pupil is a member of two or more groups according to his talents, abilities and interests — this thing is being accomplished in an increasing number of high schools — there is little or no need for Greek letter societies in order to provide for adequate social activities on the part of all pupils. When small cliques are formed outside of these school groups they play no considerable part in affecting the life of the school.

New Times Demand New Methods

HOW swiftly the educational world changes! A superintendent of schools was heard to remark recently: "Vocational training is not much needed now. I was partly responsible for the general introduction of vocational education a few years ago, but I am going on the warpath again to do all I can to do away with vocational education or to change the character of it completely. We have been making a survey in our city and we find that most of the work that has to be done now is performed by machines and that the worker is not required to do anything demanding special training. He can learn in a few hours all that he needs to know about his vocation. This is not altogether true now but it is rapidly becoming so. I have been deeply impressed with the extent to which articles of construction for buildings are delivered already made. They simply have to be put together according to specific directions that can be followed by anyone of average intelligence without special vocational training."

This superintendent thinks that what the schools must do principally from now on is to instruct young persons how to live as citizens rather than how to make a living as workers. He maintains that any young person leaving the schools to engage in a vocation will have to do such narrow, specific work that it is a waste of time and money to train him in processes that he will never need to perform. A survey conducted in Minneapolis a short time ago apparently revealed essentially the same facts concerning the extent to which most work has become mechanized. About all that human hands have to do is to start and stop machines and supply them with fuel and oil.

Before we scrap all our vocational schools and courses, however, we had better have more extensive and thoroughgoing surveys of vocational needs than have been made thus far, or at least that have been published. It will be granted by all educators, of course, that any type of school work that has ceased to be of service should be abandoned. We are practicing this principle in eliminating unused words in spelling, unused processes and tables in arithmetic, unused constructions in grammar, unused minutiae in geography, and so on. The superintendent quoted believes that most of vocational training now is unused and it ought to be cast out of the public schools.

Hardly have we succeeded in establishing a program of education for industry than the methods of the industry put our program out of date. Certainly teachers are being made to realize as fully as any other group that we are living in a swiftly changing world.

Happy to Say—By WILLIAM McANDREW

WELL, well! My tribute to janitors has touched some responding chords. Charley Chaney, high school principal, Sanger, Calif., writes that I awake his poetic muse. He sends me forty lines on "Our Janitor." They're all good. Here's a sample:

We offer toasts of every kind
To men of wealth and fame
Who've crowned their efforts with success
Playing a winning game.
I toast the good school janitor
As through his work he goes
Purveyor of our comforts
Disperser of our woes.

FRED LEWIS, Boston bookman, collector of epitaphs, says he copied these two from tombstones, one in a Pennsylvania cemetery, one in Massachusetts:

"In memory of Thomas Pride, school janitor. He put pride into his work."

"Here lie the bones of Henry Uhl,
The janitor of Barton School.
For forty years he rang the bell
And did his every task so well
In Heaven he's getting his reward
By janitoring for the Lord."

BACKWASH FROM BOULDER. From the University of Colorado, Prof. Harry Barrett splashes us: "You ask in 'Happy to Say,' noting that speakers are urging teachers to acquaint high school pupils with the political questions of the day, 'How about the answers?' Well, how about 'em? You wouldn't acquaint high school pupils with the answers, would you? We know the answers, but they're wrong."

THE REV. FRED HAY, pastor of the Methodist Church, Trion, Ga., says Christianity is work, not a Sunday ceremonial. He wears overalls in his pulpit. Most of the men in the congregation are in denim working clothes. This is a timely tip for school commencements, with their aping medieval robes utterly without significance in the world's present needs.

ALL the school men I know, except three, consider the typical closing exercise of as much pertinence to the purposes of school as a whip-socket is to an automobile. Prof. Harry Pittsburgh McKown has written a whole book about it—very

warm. Why don't you end the silliness and devise a closing that means the same as you say school does? What are you afraid of? The graduating class? The few parents involved this year? The school board member who peddles the diplomas?

THE fear of the board is not the beginning of wisdom; it's the end of it.

IF IT takes you four years to get your school system into shape, you beat what five board members could do in twenty years.

THE reason why Mark Hopkins, a boy, and a saw log got such a high reputation for efficiency is that they had no school board.

BUT, there are few more valuable educational assets than that children naturally respect teachers; teachers, their superintendent; the superintendent, his board; and everybody, all the others.

FEAR is soot on the spark plug of good work.

YOU may not be able to get rid of fear but you can conceal it, which, for practical purposes, amounts to the same thing.

ALVIN C. EURICH, University of Minnesota, in his book, "The Reading Abilities of Students," lists one hundred practices that mark the grown up good reader. This adult generation is crowded by bunglers whose time spent in the presence of print is a tragic waste. That is not your fault. But if, with all the facts of method you can now utilize, the next generation misses real reading, the fault will be yours.

ONE thing a cloud of witnesses from Angela Keys in high school to William Lyon Phelps in the university testify is that the modern boy and girl are cleaner, brighter, more keen for general unselfish welfare than their parents are.

IN 1900 there was in educational literature a lot of whining about the teacher's right to be happy. Now the happiness mostly stressed in the professional books is that of getting big work well done.

CUT down a lie with an ax, pour salt on the roots and you'll later find it growing hale and hearty on the other side of the fence. That's not so bad since the same is true of truth.

Two Services Designed to Make Winter Meeting More Beneficial

BEGINNING on Monday afternoon, February 22, and continuing through Tuesday morning, Tuesday afternoon, Wednesday morning and ending with Wednesday afternoon ten well known and authoritative educators will be on duty, periodically, at Booths 65 and 66 of *The NATION'S SCHOOLS* for the discussion of problems of educational administration. These men have kindly consented to act as consultants during the meeting of the Department of Superintendence and are performing these services for the benefit of the whole field and for the advancement of educational standards.

All superintendents and others attending the meeting are urged to come to Booths 65 and 66 when any of these men are on duty and to feel free to present any problems with which they have been confronted during the past eventful year. Prof. Boyd H. Bode, Ohio State University, Prof. Harry Dexter Kitson, Columbia University, Prof. Julian E. Butterworth, Cornell University, Dean Lester B. Rogers, University of Southern California, Prof. George C. Kyte, University of California, Prof. John Guy Fowlkes, University of Wisconsin, President Charles McKenny, State Teachers College, Ypsilanti, Mich., George M. Wiley, Department of Education, Albany, N. Y., Gen. Leigh R. Gignilliat, Culver Military Academy, and Supt. Fred W. Frostic, Wyandotte, Mich., will be assigned sessions during the three days.

Such subjects as school finance, vocational guidance, health of pupils, supervision, rural education, school plant maintenance and others may be discussed with the consultants.

The *NATION'S SCHOOLS*' booths will also be the center for information relative to the other exhibits. All information relative to what is being shown, where the booth is located and whom to see at the booth will be competently furnished by those stationed at the booth. Time will be saved the visitors by first calling at Booths 65 and 66 and using this location as a point of orientation for the meeting. Both services are free to everyone and are our contribution towards the success of the Department of Superintendence meeting at Washington.

The *NATION'S SCHOOLS*, Booths 65 and 66

Schoolhouse Planning: How the Plan Can Best Be Presented to the Board and the Community

By ARTHUR B. MOEHLMAN, Professor of School Administration and Supervision, School of Education,
University of Michigan

THE technical phases of the school plant program survey have been described in detail in the seventeen preceding articles of this series. The next phase of the program is concerned with its presentation to and acceptance by both legal authorities and the people in general. This problem of presentation will be considered in three successive articles including the development of the public relations program, the methods of presentation to the board of education and the methods of obtaining popular approval of the large capital extensions required.

It might be assumed that under field conditions the public relations activity would be an operating fact and that little further attention need be given to it. In other words, the school plant program needs might be fitted into this program whenever the specific need arose. This assumption is true provided that definite steps have been taken to develop a comprehensive plan for public relations. However, such is not the case in the average situation. It is therefore desirable to develop this phase of the school plant program by a skeletonized presentation of some of the more vital problems of public relations.

There are eight definite steps in the development of a public relations program. The first of these is to conduct a sociologic survey to find out who the people are, what they do, what they think and what their individual and social attitudes and ideals are. The technique for conducting this survey has been described in a previous article in *The NATION'S SCHOOLS*.¹

Formulating the Policy

The second step, after all of the essential information on the community has been secured, analyzed and digested, is the formulation of policy. Responsibility for the development of a plan for policy enactment definitely rests on the professional executive or superintendent. The power to adopt policies and to provide for making them effective rests legally with the board of education.

Before procedures may be developed and carried out it is therefore necessary to secure the adoption of a general fundamental policy by the board of education.

In the formulation of policy there are several distinct steps. First, the sociologic survey has given the superintendent the factual data with which to support the need of a policy. Second, this need must be interpreted by the executive and presented to the board of education in a series of generalized statements for consideration and discussion. Since the policy should represent a long-time plan, it is highly desirable that it present only generalized objectives. Details may be cared for by procedures that may be made each year. Policy, however, should be reasonably constant for a long period.

Why the Board Must Be Educated

The third step in the development of the program is the education of the board of education, as individuals and as a whole, with respect to the existing need. In this phase of development the data derived from the sociologic survey will be of unusual value. They will enable the executive to point out to board members what are the community attitudes towards the public schools and some of the difficulties involved in the development of better understanding and cooperation between home and school. Many prejudices and doubts on the part of board members must be overcome. Many preconceived and traditional concepts of school and community relationships must be overcome. The success of policy development depends on the skill with which the executive develops this phase of the program.

During this process of education the board of education will engage in discussion and deliberation. It is highly desirable that the period of education and of discussion run simultaneously. The best procedure is consideration of the program by a committee, when full and free discussion is possible without commitment. Time is a vital element. The executive must have patience. The decision must not be hurried and he must not expect im-

¹Moehlman, Arthur B., *The Sociological Survey in the Public Relations Program*, *The NATION'S SCHOOLS*, April, 1930, p. 72.

mediate action. The time element will vary directly with the type of board and the skill with which the members are being informed concerning the need for action. It may take only a few weeks or it may require several months before action is possible. It is highly desirable to secure unanimous support of a proposed policy and to wait until this is possible, rather than to have only partial support by forcing the issue too rapidly. Unless the policy is unanimously adopted, there is too much danger in carrying on subsequent activity and the popular mind will be disturbed by the apparent division of opinion among the members of the board of education.

The Superintendent as a Policy Maker

When the stage has been reached when all members feel the need for a policy covering the problem, the individual members of the board of education will be ready, without outside pressure, to take action and to adopt a policy, at the same time instructing the superintendent to formulate means of procedure for consideration and approval.

Although the legal power of policy making rests with the board of education, its presentation form will be determined by the executive. The formulation of a general plan involves the choice of several types of general procedure through which the objectives—a better community understanding, appreciation, cooperation and confidence—are to be attained. The first major choice is between periodic or high pressure activity or a continuous campaign of community education. In the past, high pressure campaigns have been most frequently used in the presentation of school plant programs. Such campaigns had their inception in war time. They are also extensively used in many industrial and commercial selling plans. This method is still almost universally used in community money getting activity in the field of social work, such as community fund drives. Sometimes high pressure campaigns to present the school plant program are conceived, directed and operated directly by the superintendent and the staff. More recently professional direction, operating either under the direction of the architect or under professional campaigners who make the collection of funds their specialty, has appeared in the public school field.

The high pressure campaign is based on the ability to arouse a conscious public opinion through an emotional appeal. Public sympathy is aroused through the exploitation of the needs of the child in such a manner that the elements of personal and social safety are emphasized disproportionately. This usually represents an attempt to overcome at one stroke the neglect in planning

over a decade or more. It presents a catch-up program as an overwhelming need that has just been magically discovered. It seeks to cover all previous errors of commission and omission by a highly colored presentation. Its success depends on skillful timing and planning the vote at the psychologic moment when a fever pitch has been established and before the opposition can get organized. A miscalculation of a week or even of days in timing may result negatively for the program. As a rule the greater the emotional intensity of the campaign, the greater the subsequent reaction on the part of the conservative element. Many an executive has discovered to his intense sorrow that "go-getter" qualities are not valued so highly by the board of education and the community after the final reckoning is made as they were during the progress of a campaign.

The selection of high pressure means of developing public relations is to be condemned because it is not fair to the people, it is unsafe for the executive and board of education, it tends to lessen confidence as a result of postcampaign reaction, it results in much exaggeration during the heat of the campaign, it provides a rallying point for reactionary elements in the community and it does not provide for the intelligent education of the people.

The second policy choice is a continuous program of community education in the purpose, value, conditions and needs of public education. It presupposes that the problem of developing a healthy public opinion toward public education is, relatively, no different from the process of educating the children. The intelligent support of the community must be developed through understanding and appreciation based on confidence.

Carrying Out the Continuous Program

The best way to establish such confidence is through constant contacts between parent and teacher, community and school. The adult cannot be hurried in this developmental process. Again, time is a vital factor. Facts may be presented, problems considered and conditions revealed, but until the parent has digested them and has developed understanding through constantly recurring contacts, it is difficult to gain intelligent support. The school program must be made meaningful to the adult not only in terms of general social needs, which may be more or less academic and far removed from the general understanding of the average person, but more particularly through the values accruing to his children who are progressing through the schools. Five and even ten years of continuous education may be necessary before a fairly complete community opinion is fully estab-

lished. The length of time will vary with the type of community and its traditional attitude. While this type of program requires much more painstaking effort and less show than the high pressure type, ultimately much finer and more lasting results will be obtained.

Why Confidence Must Be Established

In the final analysis all public as well as private activity rests on the basis of confidence. Into public activity enter also the legal and social responsibilities of the people's representatives. The selection of policy method, which will operate over a long period, must be considered in these terms. In some instances, particularly when high pressure methods are used, it has been possible to achieve immediate success by using the cover-up method and deliberately concealing vital facts and meeting questions on a subjective and emotional basis. The final price, however, is usually high. In other instances, it has been possible to achieve immediate progress through the partial presentation of some facts and the deliberate concealment of other facts. As far as the layman is concerned the use of completely unorganized facts leads to confusion and doubt because of his inability to understand and interpret statistical data. Organized factual presentation satisfies both legal and moral requirements and over a period of time will probably produce the most satisfactory results. If this procedure is new to any community, it may require considerable time and some personal hardships until it is accepted. Once community confidence has been established, the result will be well worth the effort.

The adoption of the policy of organized factual presentation is conditioned by the vision of the individuals involved. Generally speaking the tenure of superintendents in any given district is so brief that they can afford to give little attention to long-time planning. They are most immediately concerned with pressing current problems. The future success of school administration and the progressive building of finer and better school systems is contingent on the vision displayed in planning for the future on a broad and effective foundation. If we are considering the immediate situation of a given superintendent, emergency conditions may point to the acceptance of an emergency policy. On the other hand, if the ultimate welfare of the public education program is accented, then the choice of informational policies narrows to the presentation of all of the facts carefully organized.

Let us assume that the sociologic information has been carefully developed and interpreted and that the superintendent is ready to present a

formulation of a general policy for a long-time program to the board of education. How should this policy be written? What should it include? What is its optimum length? A policy should first of all be general. It should cover the field of activity thoroughly but in a nontechnical way. Above all, it must be remembered that a policy should be written so that it is meaningful to a layman.

Since policy becomes the legal property of the board of education after adoption rather than the personal plan of the superintendent, it is doubly necessary that the board member should not be in doubt about any part of it. He must be ready to defend it. A policy should include, either directly or by implication, all general phases of the activities involved in subsequent, more technical procedures. Above all, a policy should be as brief as it is possible to make it without sacrificing any essential elements. Policies for different activities will vary in length. A public relations policy may be relatively brief yet very comprehensive in character. As an illustration the public relations policy of the Hamtramck, Mich., board of education is quoted in full.

"Public relations shall be considered as that activity which seeks to keep the community informed of the purpose, value, conditions and needs of public education.

"The board of education shall consider it a legal and moral duty to keep the people of Hamtramck fully and completely informed in respect to the purpose, value, conditions and needs of its public schools.

"It shall be the policy of the board of education to provide for: (1) continuity of information; (2) frequency of contact; (3) factual presentation and (4) adjustment to the various levels of understanding essential to any community.

"Information shall be provided for all of the people through oral, visual, written and social means.

"It shall also be the policy of the board of education to interpret the public to the schools."

Developing the Procedures

Major emphasis has been purposely laid on the technique of public relations policy development because numerous inquiries are constantly received on how this may be done. The other steps will be considered only briefly here. After the board of education has adopted a policy the superintendent will be directed to prepare essential procedures. These represent the technical plans whereby the general and specific objectives are to be achieved. They should be individually planned for each community and experimentally developed. It is desirable that representatives of all groups

of agents involved in the program be engaged in its development. The cooperative method of building is by far the most effective not only in development and experimentation but also as a means of training the key agents who will later participate in the activity.

The next step consists in training the agents for the specific work they are to do. The entire philosophy and technique of community education must be carefully presented so that every agent will realize his individual responsibility for the success of the program. It is just as important to train the agents for their work in community relationships as it is to provide specialized in-service training for any new or radically changed teaching technique.

How the Program Must Be Executed

Piecemeal execution of the public relations program is desirable. The entire problem of community education is so new and so intricate that it is questionable whether any district can immediately put the policy completely into effect. It is much better to concentrate on a few activities and get them well started before proceeding to a solution of the more complicated problems. By using the method of piecemeal execution many mistakes may be avoided and in this field mistakes of omission are preferred to mistakes of commission. Those executing the program must proceed cautiously and slowly and they must be certain of their ground.

Constant appraisal of all phases of activity is necessary for the success of the program. The facts must be faced as objectively as possible. Those responsible for the program must not be deluded or lulled into security by the assumption that if something is done it is better than nothing. In the field of community education this assumption is hardly ever warranted.

The purpose of this discussion as a preface to a more detailed subsequent statement of its direct application to the school plant program is to show that high pressure tactics are of doubtful value and that the presentation of any plan for school plant enlargement must be prefaced by a long period of community education. It is obvious that a public relations program cannot be built successfully overnight. It requires at least five years of consistent and intelligent effort to make any deep and lasting impression on community thought. It is therefore well for superintendents who see the need of a school plant program in the distant future to begin their public relations program many years in advance and to build a sound general foundation for the ultimate presentation of physical needs.

Teachers' Associations Show Rapid Growth

Teachers recently have discovered that their interests may be promoted and defended by group action, says William John Cooper, commissioner of education, in commenting upon the comparatively new development of teachers' organizations throughout the United States.

The findings in a study of such organizations have recently been published.

The survey, which was conducted by M. D. Hoffman, Simon Gratz High School, Philadelphia, discloses that these associations are distributed geographically throughout the United States with the fewest in the South and the largest number in the East. In median size they range from 300 to 500 members.

Open to both sexes, they are increasing in number each decade. They are democratic in control and are representative of the teachers. Broad in aim, with opportunity for expansion and adjustment to new conditions, they meet monthly and have as their aim the promotion of the profession.

They aim to be helpful to the local school administration in such matters as formulating policies, securing school publicity, developing curricula and methods of instruction, preparing salary schedules, providing training in service and adjusting personal difficulties.

What the Activities Include

They have developed a wide range of welfare, benefit and philanthropic activities. Outstanding are (1) aid to needy teachers; (2) seasonable gifts to needy, and to public institutions or to public funds for communal purposes; (3) group insurance; (4) protection of legal and professional rights of teachers; (5) loan funds; (6) sickness, accident and hospital benefits.

Legislative activities of teachers' associations cover a wide range of problems and have been fairly successful. The activities for general educational appropriations, for special educational appropriations, and regarding certification and qualification of teachers, appear to be the most successful ones.

Associations have their own publications and use the daily press and other agencies for publicity. They are financially sound. Their assets, receipts and disbursements vary widely. Ten sources of revenue are indicated, and the range of total receipts reported is from \$25 to \$27,083.42. The disbursements are quite varied in nature. The reports of total disbursements range from \$23.10 to \$26,299.14.



Seventy years ago, Frederick Walton looked into a can of paint—and started a great industry. Above: One of the gigantic linoleum factories owned by the largest manufacturer of smooth-surfaced floorings in America, Congoleum-Nairn Inc.

A long way from a can of paint!

A young man stares earnestly at the gummy film which has formed on the paint in an open can. What is it? Is it good for anything? Experiments followed. Young Frederick Walton combined this rubber-like substance (oxidized linseed oil) with this and that—finally with ground cork. And an amazingly useful new floor had been discovered—linoleum.

That was in 1863. Only a few years later, linoleum came to America. Ground was broken for the beginning of the great factory illustrated above—today the home of Sealex Linoleums.

It would take more room than we have here to tell the whole story of linoleum progress. Let us finish what we have begun by sending you two books:—

The first is a *book of pictures*—containing fifty-

one actual photographs of modern, resilient floors in many different types of buildings. It will show you what distinctive effects may now be inexpensively achieved with these materials.

The second is a *book of facts* about school floors—written by architects. It gives you information that makes for *intelligent buying*.

Both books are free. Write for them today—and for full information on our Bonded Floors installation service, in which Sealex materials are backed by Guaranty Bonds.

CONGOLEUM-NAIRN INC. . . . KEARNY, NEW JERSEY

SEALEX
LINOLEUM FLOORS

Your Everyday Problems:^{*}

The High School Teacher Analyzes Her "Principal" Difficulties

By JOHN GUY FOWLKES, Professor of Education, University of Wisconsin

THE study reported here is the converse of the study on the administrative difficulties between high school principals and classroom teachers from the viewpoint of the principal that appeared in the January number of *The NATION'S SCHOOLS*.¹

Fifty high school teachers were interviewed and asked to list the administrative situations out of which they had experienced administrative difficulty with high school principals. From these interviews, a list of thirty situations was made. This list of thirty situations was mimeographed and sent to 1,000 teachers scattered throughout the forty-eight states in communities having a population of from 10,000 to 30,000.

How the Teachers Were Chosen

The teachers were asked to check each question as a "Major Difficulty," a "Minor Difficulty" or "No Difficulty." These terms were defined as follows: (1) Major difficulty is one that is often met and that results in a serious limitation of the effectiveness of the school administration; (2) minor difficulty is one that appears often, but is not serious; or one not often appearing but serious; or one not often encountered and then is not serious; (3) no difficulty means a situation which in no way limits the effectiveness of the school administration, or so little as to be negligible.

The number of teachers chosen from each community was determined on the basis of the ratio of school population within a given state to the total school population in the United States. In sparsely settled states having only a few cities of the sizes indicated, teachers from smaller communities were consulted. It is interesting to note that while replies were received from 375, or 75 per cent, of the 500 principals consulted in the converse of this study, replies were received from only 350, or 35 per cent, of the 1,000 teachers.

^{*}Discussions in this department deal with problems that frequently confront principals and superintendents. Inquiries on problems of this nature should be addressed to Doctor Fowlkes.

¹Acknowledgment is made to Ralph M. Murphy, a graduate student at the University of Wisconsin, for the statistical and clerical work involved in this study.

For purposes of tabulating, summarizing and study, the replies were grouped according to size of the senior high school faculty, as follows:

Group 1—High schools having 0-14 teachers

Group 2—High schools having 15-29 teachers

Group 3—High schools having 30-49 teachers

Group 4—High schools having 50-up teachers

The results of this study, "Recognized Admini-

Ques-	Major				Minor				No				Major	Minor	No
	1	2	3	4	1	2	3	4	1	2	3	4			
1	2	2	1		8	9	9		100	90	89	89	2	8	90
2	2	3	2		6	17	27	14	94	83	70	84	3	20	77
3	6	5	10	5	25	26	19	9	69	70	71	86	7	21	72
4	6	4	3	5	12	26	13	11	92	74	84	84	4	17	79
5	11	9	9	9	50	24	23	21	50	65	68	70	10	24	66
6	4	5	12	15	15	15	14	7	82	81	81	81	5	14	81
7	2	3	5		9	14	14		100	89	83	81	3	11	86
8	5	9	8		14	15	9		100	81	76	82	7	15	80
9	19	14	15	9	31	34	37	44	50	52	50	47	13	37	50
10	6	10	11	7	19	27	29	21	75	63	60	72	10	27	65
11	13	11	14	9	31	24	24	26	56	65	62	65	12	24	64
12	3	5	7		13	13	5		100	84	82	88	4	11	85
13	11	8	14		18	31	44	33	82	58	48	53	10	36	54
14	1	2			6	5			100	93	95	98	1	4	95
15	6	9	15	12	25	42	45	25	69	49	41	63	11	41	48
16	1	2			8	7	2		100	91	93	96	1	7	92
17	2	5			6	8	5		100	92	95	20	1	5	94
18	2	3			10	6	9		100	88	91	91	2	8	90
19	2	3	2		12	9	5		100	86	88	83	3	9	88
20	3	3	2		12	8	5	12	88	89	92	86	3	7	90
21	4	8	9		17	29	19	16	100	79	65	72	5	22	73
22	6	5			6	12	9	9	94	82	88	91	4	10	86
23	11	7	12		18	20	18		82	69	80	70	9	17	74
24	6	2	5	5	8	9	9	2	88	89	86	93	4	8	88
25	2	6	2		6	13	14	14	94	85	80	84	4	13	83
26	4	7	9		25	11	9	2	75	85	84	89	5	10	84
27	3	3	2		6	13	12	12	94	84	85	86	3	12	85
28	4	5	9		25	18	17	12	75	80	78	79	4	17	79
29	6	8	5		12	18	12	14	82	78	83	86	5	14	81
30	2	1			11	11	9		100	87	88	91	2	10	88

Table I gives the percents of teachers reporting Major, Minor, and No Difficulty in each of the four groups of schools, as defined earlier in this report. In Group 1, 16 teachers replied; in Group 2, 140; in Group 3, 181; in Group 4, 43.

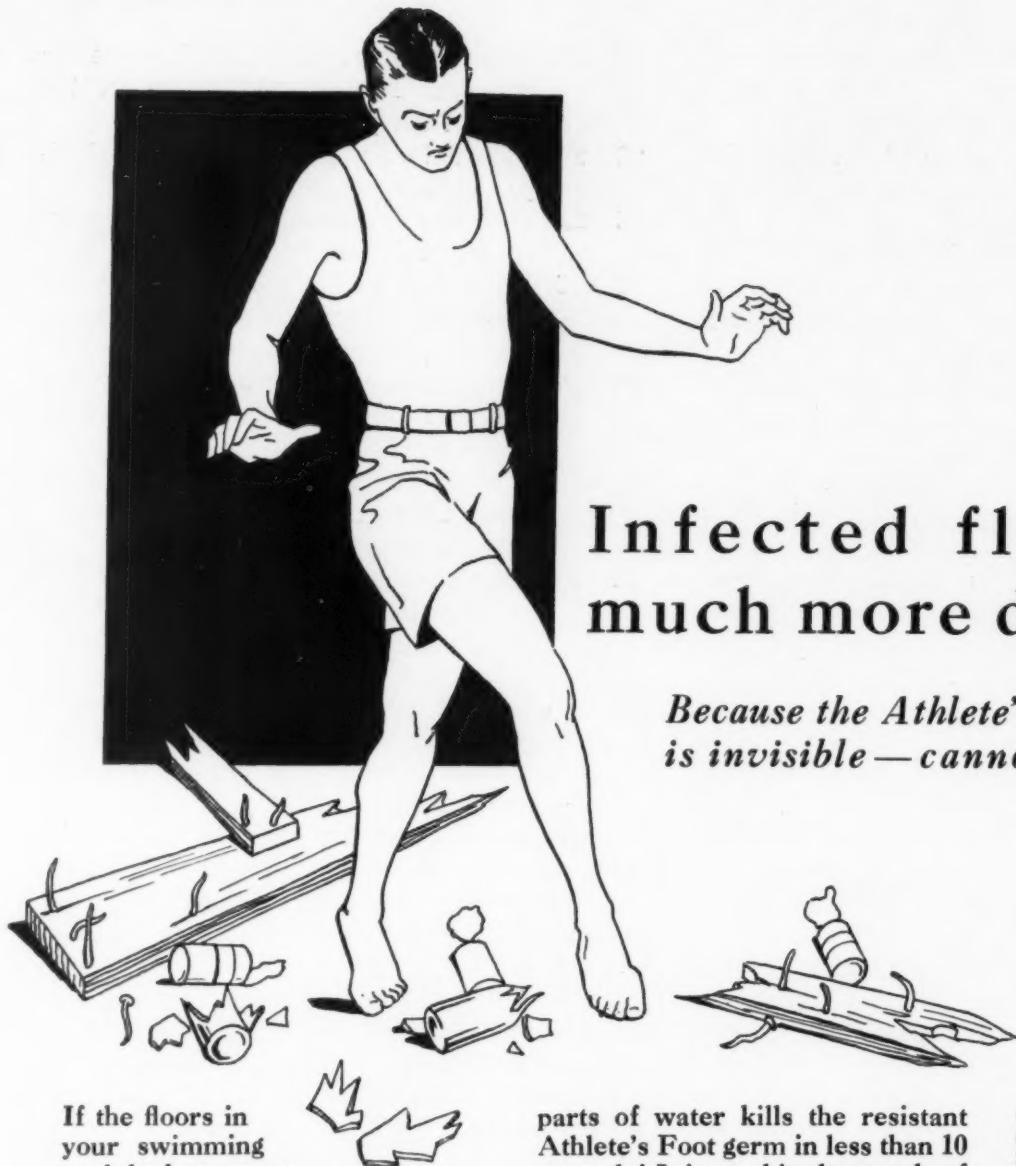
Table II is the total summary, giving percents of the total 380 replies, which were Major, Minor, and No Difficulty for each of the thirty difficulties listed.

Summary of results in percentages.

strative Difficulties Between High School Principals and Classroom Teachers From the Viewpoint of the Teachers," are as follows:

Rank of Difficulty No.

1. Do you have difficulty because the principal holds teachers' meetings too often?
2. Do you believe that the principal holds teachers' meetings when a notice from his office would suffice?
3. Do you have any difficulty because the principal fails to cooperate on administrative rulings which affect both teachers and pupils?
4. Does the principal fail to hold teachers' meetings often enough?



Infected floors are much more dangerous

Because the Athlete's Foot menace is invisible—cannot be avoided

If the floors in your swimming pool, locker rooms and shower rooms were littered with jagged obstructions, they would be less dangerous than floors harboring Athlete's Foot germs. Because your students could see the obstructions. But they cannot see, cannot avoid the Athlete's Foot menace.

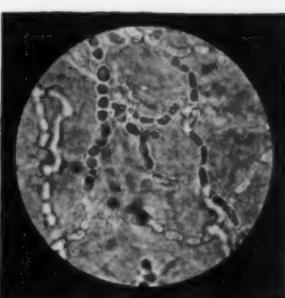
To prevent the spread of this ringworm disease, the U. S. Government Public Health Service recommends that floors trod by many unshod feet be washed frequently with strong disinfecting solutions. Alta-Co, diluted in 4

parts of water kills the resistant Athlete's Foot germ in less than 10 seconds! It is used in thousands of schools to wash sources of contamination—to combat the spread of Athlete's Foot—to fight respiratory diseases: pneumonia, influenza, grippe and the common cold.

And Alta-Co deodorizes. Diluted in 10 parts of water and sprayed into bowls, urinals, receptacles, it instantly neutralizes foul odors—leaves no odor whatsoever.

For Alta-Co is odorless. And it is harmless in contact with the human skin. Write for detailed descriptive booklet S—there is no obligation whatsoever in doing so.

Photomicrograph showing Athlete's Foot germs greatly enlarged. They can easily penetrate the unbroken skin. They can resist boiling in water for 15 minutes. But they cannot resist Alta-Co. Accurate laboratory tests prove the power of this odorless disinfectant; details on request—gladly.



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6 5. Is there difficulty because the principal fails to cooperate in matters of discipline?

14 6. Does the principal fail to support the teachers supervising extra-curricular activities?

21 7. Are you required by the principal to do an unreasonable amount of work (not on extra-curricular activities) outside of school hours?

13 8. Does the principal hold you responsible for more than your share of the disciplinary problems?

2 9. Is there any difficulty because the principal fails to give you constructive criticism on your work?

4 10. Does the principal fail to accept constructive criticism, offered by the teachers, of the policies, organization and administration of the school?

5 11. Do you have any difficulty because the administration of the principal fails to cultivate a spirit of cooperation among the teachers?

18 12. Is there any difficulty because the principal fails to attain, to a reasonable degree, the standards which are maintained for the teachers?

3 13. Do you have difficulty because the principal disarranges the work of the classes by holding special assemblies for the pupils?

30 14. Is there a recognized difficulty due to the principal holding conversations with you during your class hours?

1 15. Does the principal disturb the class hour by sending in notices?

28 16. Do you experience any difficulty due to the principal entering and leaving your room during classes?

29 17. Do you have difficulty due to the principal requiring your services elsewhere during the class hour?

26 18. Does the principal fail to accept suggestions in matters of textbook selection?

23 19. Is there any difficulty due to the principal failing to accept suggestions in matters of ordering supplies?

25 20. Do you have difficulty because the principal betrays your confidence?

8 21. Is there any difficulty due to the fact that the principal requires you to do too much routine work?

20 22. Is there any difficulty due to the principal overruling your judgment in the grading of your pupils' work?

9 23. Do you have any difficulty because the principal requires you to teach too many class periods?

22 24. Does difficulty arise due to the principal "talking about" the teachers?

16 25. Is there any difficulty because the principal is not friendly with the teachers?

17 26. Do you have difficulty because the principal "listens to gossip" concerning the teachers?

19 27. Does difficulty arise due to the principal's failing to handle requisitions promptly?

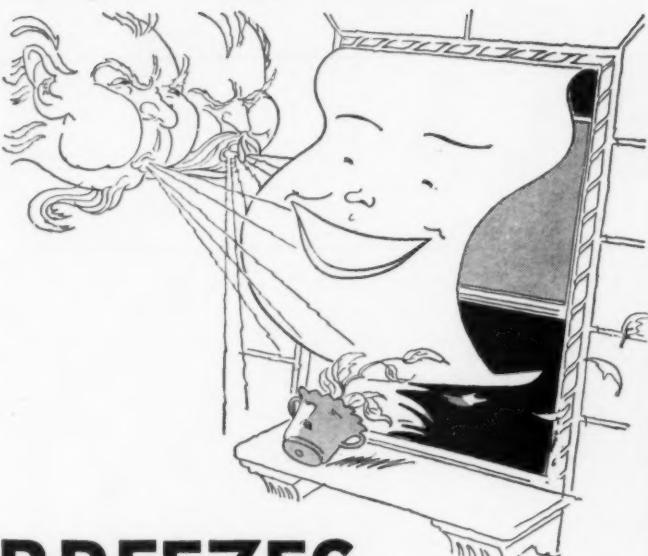
12 28. Is there any difficulty due to the principal expecting you to supervise too many extra-curricular activities?

15 29. On occasions when you have had difficulty with pupils, does the principal fail to support you, when you have followed the administrative policy?

24 30. Do you have any difficulty because the principal expects unreasonable faithfulness on your part in attending high school activities?

On the basis of the data presented in this discussion the following conclusions may be drawn:

1. The geographical location of the school seems to affect very little the nature of the difficulties encountered.
2. The size of the school seems to affect very little the nature and degree of difficulties met.
3. The variation in the degree of difficulty that is significant is found between the different situation difficulties.
4. Considering all the replies, 50 per cent or more of the teachers report difficulty in only two of the situations noted in the studies and 25 per cent or more report difficulty in nine of the situations.
5. The percentage of teachers reporting difficulty in each of the different transactions ranges from 5 to 52, the median percentage being 15.
6. When this study is compared with the one reported in the January number of *The NATION'S SCHOOLS*, it seems evident that high school principals are conscious of many more serious personal administrative difficulties than are high school teachers.
7. The percentage of teachers reporting difficulty is not significant in the majority of the situations listed in this study.
8. It is suggested that studies of this type be made on an intensive scale in a large number of schools.
9. It is recommended that this and similar studies be made the basis of a more intelligent administrative policy in the high schools.



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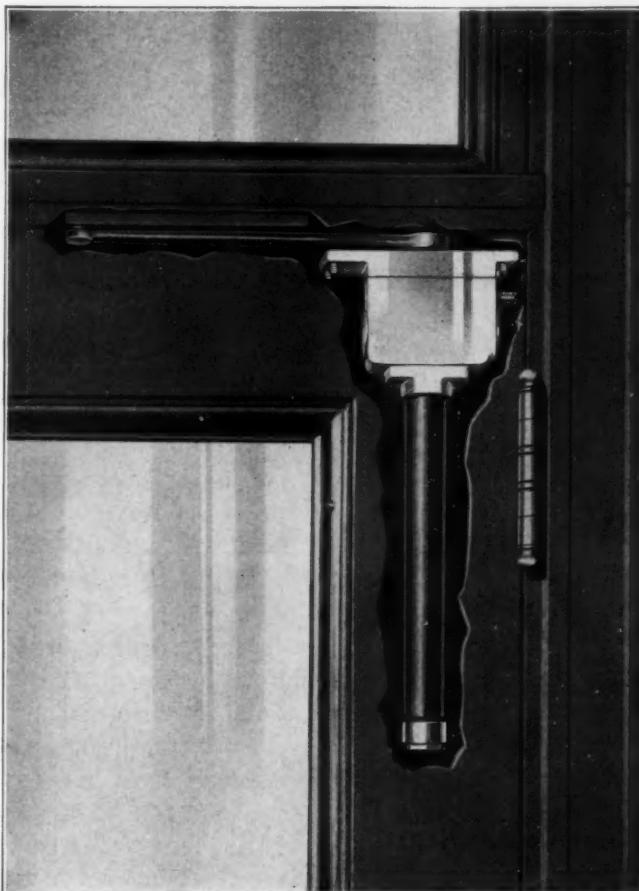
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News of the Month

Colleagues, Students and Friends Pay Final Tribute to M. V. O'Shea

COLLEAGUES, students and friends of the late Prof. M. V. O'Shea, from Madison and from neighboring and distant places, paid their final tribute to the great educator on Sunday, January 17. Funeral services were held in the First Congregational Church.

Eulogies were given by Dr. E. A. Birge, president emeritus, University of Wisconsin, and Dr. E. C. Elliott, president, Purdue University, Lafayette, Ind., former head of the University of Wisconsin school of education.

Doctor Birge told of Professor O'Shea's service in conciliating warring factions in education with a never failing intelligence and good humor.

"In the middle nineties it was plain that the university was no longer an experiment. In preparation for the establishment of a school of education Professor O'Shea was brought to Madison, where he made his department the largest in the school, both for novices and for teachers who returned for the summer. Numerous books attested the breadth of his interests and the solidity of his work. Editorial directorships came, both of series of books and of journals. Surveys of educational systems, first that of a city, then that of a distant state, and again that of another state, gave repeated witness to the confidence of the national public in his experience, his capacity and his good judgment.

"In the full course and sweep of his many activities came the end. 'Does not life go down with a better grace,' asks Stevenson, 'foaming in full body over a precipice, than miserably straggling to an end in sandy deltas?' Fortunately neither of these ends was his. To-day we mourn no untimely end, no life of promise to which performance was denied; nor do we have to think of an old age 'long bound in shallows and in miseries.' The river of his life, still running with full current, poured itself in a moment into the ocean of eternity which was its source."

Doctor Elliott said that Professor O'Shea had

been a deep and permanent influence upon tens of thousands of lives.

"Professor O'Shea was a stimulating guide and companion of youth," Doctor Elliott continued. "He was always the crusader for those causes which belonged to that great institution which he served for three and a half decades.

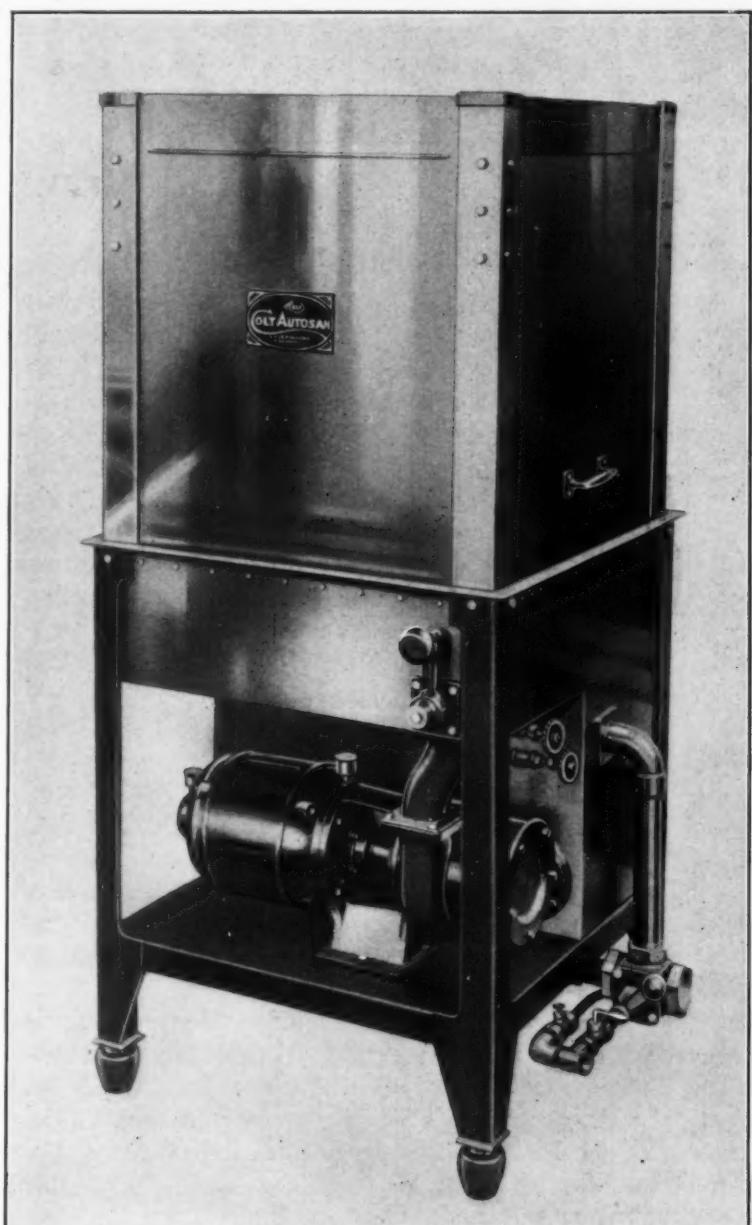
"He never forgot the need to know. He had the professional detachment of the scientist, but he never forgot his attachment to human beings. He mastered the most difficult and complicated knowledge of the spirit of childhood and youth. He labored to have the child understood by the world. No philosophy of man has yet produced a complete reconciliation with death. His philosophy was to teach the preparation for living. He lived fully to the last."

Prominent Educators Serve as Pallbearers

Honorary pallbearers included Governor LaFollette, of Wisconsin, President Glenn Frank of the University of Wisconsin, Chief Justice M. B. Rosenberry, Prof. Alexander Meiklejohn, Prof. Frederic L. Paxson, Prof. E. B. McGilvary, Prof. E. A. Ross, Prof. Harold Bradley, Prof. L. R. Jones, Dr. W. F. Lorenz, Prof. V. A. C. Henmon, Prof. C. K. Leith, Prof. Warren Mead, Prof. M. F. Guyer, Prof. T. M. Buck, Dean F. E. Turneaure, Dean C. J. Anderson, Dean S. H. Goodnight, Dean G. C. Sellery, Prof. W. J. Chase, Prof. F. L. Clapp, Prof. H. L. Russell, Prof. W. H. Varnum, Prof. J. C. Elson, Prof. F. W. Roe, Dr. Robert Van Valzah, Prof. Emerson Ela, Prof. Harry S. Manchester, John A. McNamara, executive editor, *The NATION'S SCHOOLS*, W. F. Quarrie, president, *World Book Encyclopedia*, and D. C. Kriegler, of the *Junior Home Magazine*.

Active pallbearers were associates of Professor O'Shea's in the school of education. They were: Prof. John Guy Fowlkes, Prof. T. L. Torgerson, Prof. H. H. Ryan, Prof. M. H. Willing, Prof. Curtis Merriman and Prof. A. S. Barr.

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*Model R-1—in galvanized iron—\$460
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Designed to clean tableware for up to 500 people a meal, the R-1 employs the sensationally successful *direct spray* principle of cleaning; it has adjustable feet, counter-balanced doors, unique single lever control, easily removed scrap trays and spray tubes, and a host of other features scarcely to be expected in a machine at its price. It is made for either corner or straightaway installation and is available in galvanized iron, copper or monel metal.

For greatly increased kitchen efficiency at greatly reduced cost, mail the coupon below—now! And remember! No matter what your dishwashing requirements, there is a complete family of sturdy, efficient Autosans—any one of which will serve you faithfully and well.

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News of the Month (Cont'd)

Florence Hale Directs New Radio Educational Series

A new series of educational broadcasts was inaugurated on January 17 under the direction of Florence Hale, president, National Education Association. The title of the series is "Our American Schools," and five programs have already been broadcast over an NBC-WEAF network, originating in Washington, D. C.

The final program of the present series will be presented at 6:30 p.m., Eastern Standard Time, February 21, on "The School and the Superintendent."

Nationally known authorities on education have been appearing on these programs.

Pennsylvania's New Educational Building Is Unique

The state educational building of Pennsylvania, erected in Harrisburg and recently opened for occupancy by the state department of education, the state library and other governmental activities, is described by W. D. Boutwell, editor-in-chief, Office of Education, as a magnificent unit of a governmental Versailles rising on the banks of the Susquehanna River.

Of the auditorium, Mr. Boutwell says: "But the chief triumph of the building is reserved for the forum, an auditorium as unique as may be found in the length and breadth of the United States. The seats are so arranged that anyone who may arise in the audience to speak can be seen and heard by every other person present. But no speaker and no listener is allowed to forget for one moment his place in the universe and his brief interval on earth. Over his head are the heavens; this is literally true, for against the dark ceiling appear more than 1,000 stars accurately plotted in exact relation to each other. Of these, 365 stars actually shed light upon those below, their twinkling provided by the local light and power company. An artist's conception of the constellations links the stars in heroic designs. Back of the last row of seats is a semicircular promenade, and on the walls flanking it are seven huge historical maps of the world from the dawn of civilization down to the present. Separating the maps are alternating black and white bands upon which have been lettered a chronology of the

most important world events and names of outstanding contributors to the advancement of civilization." A view of the auditorium and stage is at the left; on the right are shown maps on the circular walls of the auditorium.

Junior College Association to Meet in Richmond, Va.

The American Association of Junior Colleges will hold its twelfth annual meeting in Richmond, Va., February 19 and 20. The meetings of the association will be open to anyone who is interested in the problems of the junior college.

Educators prominent in the junior college field will appear on the program. F. W. Boatwright, president, University of Virginia, Richmond, will give the address of welcome to the delegates. Following his address, Fred J. Kelly, chief, division of colleges and professional schools, Office of Education, Washington, D. C., will speak on "The Fusing of High School and College."

"Guidance in the Junior College" is the subject of an address to be given by James L. Robb, president, Tennessee Wesleyan College, Athens, Tenn. "The Four-Year Junior College" will be discussed by Frederick Eby, professor of history and philosophy of education, University of Texas, and "Recent Developments in Junior College Administration," by W. W. Carpenter, professor of education, University of Missouri.

Other speakers will include: Henry Gratton Doyle, dean of the junior college, George Washington University, Washington, D. C.; L. W. Smith, superintendent of schools, Berkeley, Calif.; Edgar D. Lee, president, Christian College, Columbia, Mo.; R. W. Goddard, dean, Rochester Junior College, Rochester, Minn.; John W. Harbison, principal, Pasadena Junior College, Pasadena, Calif.; H. G. Shields, assistant dean, school of commerce and administration, University of Chicago; A. E. Joyal, Office of Education, Washington, D. C.; Katharine M. Denworth, president, Bradford Academy, Bradford, Mass.; Ben D. Wood, bureau of collegiate educational research, Columbia University; Wyatt W. Hale, registrar and assistant to the president, Birmingham Southern College, Birmingham, Ala.; Walter Crosby Eells, professor of education, Stanford University.

Ray Lyman Wilbur, secretary of the interior, is to be the principal speaker at the annual dinner.

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News of the Month (Cont'd)

Denver Plans Play Festival in Honor of Washington

The George Washington Bicentennial will be the inspiration of the annual play festival of the Denver Public Schools, Denver, Colo., to be held on the afternoon and evening of March 4 in the city auditorium.

Episodes from the childhood, youth and manhood of the great American will be carried out in dance and pageantry by 4,000 Denver school children. English, Dutch and Scotch-Irish dances typifying the peoples and customs of the thirteen colonies will constitute a prelude to the festival which will be given over to traditional and historic incidents in the life of George Washington.

The legend of the cherry tree will have its place; the clog dances, mazurkas and minuets of old Virginia will be given; frontiersmen will be there with muskets in hand; and the story of Betsy Ross will be retold in a dance colored with red, white and blue.

The play festival is under the direction of the department of health education of the Denver Public Schools. The program will provide an opportunity for thousands of citizens of Denver to witness this celebration of the two hundredth anniversary of Washington's birth.

Association of the Middle States Shortens Name

The Association of Colleges and Secondary Schools of the Middle States and Maryland has shortened its name and will hereafter be known as the Middle States Association of Colleges and Secondary Schools.

School Building Activities for 1932 Are Predicted

Prognostications of the building activities in the educational field during the first quarter of this year, based on last year's record, are given in the January issue of the *Architectural Record*.

In the first quarter of 1931, there was spent for educational buildings \$60,415,500. This was increased considerably in the second quarter. The third quarter figures showed a slight decrease over the second quarter, while the fourth quarter re-

vealed expenditures lower than those of the preceding quarters. The total sum spent for educational buildings during 1931 was \$228,692,900. The sum that will be spent during the first quarter of 1932, according to the estimate, is \$46,000,000—in thirty-seven states east of the Rocky Mountains.

New Jersey Increases Amount Spent for Education

Expenditures for public education in New Jersey during the year ended June 30, 1931, totaled \$118,800,195, according to the annual report of Charles H. Elliott, state education commissioner. About one-half of that amount was for teachers' salaries. The increase over the preceding year was about \$6,000,000.

Pupils enrolled, including evening classes but not summer schools, numbered 868,200, and employees numbered 29,502. The value of school property at the close of the year was stated to be \$306,803,743.

Los Angeles to Be Scene of World Recreation Congress

A world congress on recreation will be held in Los Angeles, July 23 to 29, under the auspices of the National Recreation Association. The congress will convene immediately prior to the Olympic games.

Invitations have been issued to the diplomatic offices of the various countries by the Department of State, and delegates from twenty-two countries have already been named. President Hoover is the honorary president of the congress.

The objectives of the congress are: to provide an international exchange of information and experience on play, recreation and the recreational use of leisure; to build interest and support for the movements in all countries; to provide one further means of developing international good will.

Discussions will deal with such subjects as parks, playgrounds, community recreation buildings, games, athletics, music, drama, arts and crafts, camping, hiking and other leisure time activities organized and developed upon a community basis. Both rural and urban activities will be considered.

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The application of Lapidolith is quite simple and your own janitor can do the job very satisfactorily. If, however, you prefer to use the trained Sonneborn service organization you can do so at very reasonable cost.

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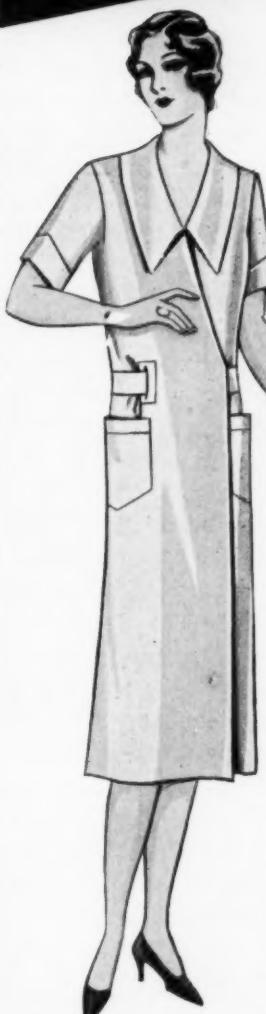
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News of the Month (Cont'd)

Cleveland's Junior High School Work Is Reviewed

Fifteen years of experimentation with the junior high school in Cleveland have been reported in the annual report of the superintendent of schools, recently published by the Cleveland Board of Education. Describing minutely the various activities of the modern junior high school, the author, R. G. Jones, makes some conclusions and predicts future developments in this comparatively new branch of the public school.

"The junior high school finds itself with a population so diverse in interests, capacities and probable future that it must consider this diversity as of first importance in attaining any goals whatever," Mr. Jones writes. "The chief goals are apparently (1) to increase the child's command over fundamental facts and processes, (2) to help the child build up, maintain and enjoy good health, (3) to help him choose, and in the case of the older child, facilitate his start in a vocation, (4) to help him form interests that will lead to worth while recreative activities in leisure time and (5) to assist him in learning how to get on with people, developing a spirit of cooperation and a recognition of right of others, individually and in social groups, large and small."

Mr. Jones predicts that new inventions, including television, now nearing perfection, will exert a great influence on the curriculum of the junior high school. He believes, according to the report, that visual aid will continue to become an increasingly important medium for broadening and enriching the scope of the pupil's experience. After several years of experimentation with radio in Cleveland junior high schools he says that "It is the opinion of those connected with the experimental work that certain desirable educational outcomes reasonably may be expected from radio lessons."

The social civic program of Cleveland junior high schools is the subject of a long chapter in the report. Changing social conditions in an industrial city make it imperative for the school to assume many obligations formerly taken by the family. The home room, clubs, student council, newspapers, social events and assemblies, all are described in this social civic chapter.

Results of revisions of courses of study in mathematics, the social studies and English are described in the report. After several years of study a com-

mittee of mathematics teachers, under the supervision of the chief of the bureau of educational research, declares that "arithmetic will continue to be the backbone of the seventh and eighth year work but there will be an increasing tendency to make this work more practical."

The Cleveland report may be obtained from the division of publications, Cleveland Board of Education, for \$1.25.

Midwest Physical Education Group Goes to Columbus

The Midwest Physical Education Association will meet in Columbus, Ohio, March 30 to April 2.

Denominations Control Three-Fourths of Private High Schools

Nearly three-fourths of the private high schools and academies in the United States are under some type of denominational control, Carl A. Jessen, specialist at the Office of Education, announced recently. More than half of them are Roman Catholic in affiliation.

Reports received from 2,760 privately controlled high schools and academies show that the enrollment now stands at 309,052 pupils.

During the past twenty-five years the number of nonsectarian schools has fluctuated from time to time but without any significant change. However, the number of pupils registered in them increased nearly 60 per cent during the period.

From more than 14,000 test scores of pupils in the denominational and independent schools, Leonard V. Koos, member of the Secondary Education Survey, found that pupils in the denominational schools excel those in the public schools slightly in mental ability, while those of the independent schools are distinctly superior mentally. Another 40,000 tests analyzed by the Educational Records Bureau showed the same results.

It was found that measured by intelligence tests, 62 per cent of the pupils in independent schools who were studied are recruited from the upper fifth of a normal distribution of American children.

In spite of the high rating of achievement by these pupils, it was held doubtful that the academic superiority of independent school pupils is as great as their intellectual superiority warrants.



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In the Educational Field

VIERLING KERSEY, state superintendent of public instruction for California, has announced his resignation, effective in August. MR. KERSEY has been named superintendent of schools, Long Beach, Calif., at a substantial increase in salary. He succeeds DR. WILLIAM L. STEPHENS, who has served as superintendent in Long Beach for twenty-four years.

A. A. POIST has been appointed purchasing agent for the school district of Harrisburg, Pa., succeeding FRANK C. FOOSE, who has resigned.

E. C. DABE, superintendent of schools, Jeffersonville, Ohio, was elected president of the newly organized Schoolmasters' Club of Fayette County, Ohio.

JAMES H. RICHMOND, Louisville, Ky., recently took office as superintendent of public instruction for Kentucky, succeeding W. C. BELL.

FRED H. CRONINGER, who has been temporarily serving as superintendent of schools, Fort Wayne, Ind., since the death of L. C. WARD last October, will continue to serve until a permanent school head is named. MR. CRONINGER'S temporary appointment was scheduled to expire January 15.

W. F. SIZELOVE, superintendent of schools, Mt. Healthy, Ohio, was elected president of the Western Ohio Superintendents' Round Table at its annual meeting in Dayton.

JOSEPH MORIARTY is the newly elected supervising principal of schools, Wallington, N. J., succeeding ERNEST A. HARDING, who is now serving as superintendent of schools, Bergen County, New Jersey.

ALEXANDER N. NICHOLSON, president, Barrett College, Pee Dee, N. C., will resign at the end of the present school year in June to become secretary-treasurer of the Health Memorial Foundation with offices in Charlotte, N. C.

CARL COTTON, county superintendent of schools, Derry, N. H., was found dead in his office January 14.

CHESTER WARD, superintendent of schools, Hubbard, Ore., has accepted a similar position in Coquille, Ore., for the next school year. He will enter upon his new duties in June.

DAVID L. BUCHANAN, superintendent of schools, Carroll County, Ohio, has been elected to head the schools of Pickaway County, Ohio, succeeding MILTON S. COX, who was recently elected assistant prohibition commissioner.

L. A. McMILLIN has been appointed superintendent of schools, Warrensburg, Ohio, to fill the vacancy in the superintendency caused by the death of RALPH THURSTON.

WILLIAM A. REILLY has been named chairman of the Boston School Committee. MR. REILLY, who is twenty-eight years old, is the youngest man to hold that position.

J. IRA HARRELSON was recently elected president, Atlanta Board of Education.

G. G. BOND, superintendent emeritus, Athens public schools, Athens, Ga., died recently. PROFESSOR BOND retired from the active superintendency in 1929.

EDGAR R. BROWN has been named temporary acting principal, St. Johnsbury Academy, St. Johnsbury, Vt., until HAROLD E. HOLLISTER, principal, has sufficiently recovered from a recent serious illness to be able to resume his duties.

DR. J. KNOX MONTGOMERY, president, Muskingum College, New Concord, Ohio, died recently. He had been head of the college for twenty-seven years.

SIDNEY B. HALL is the new superintendent of public instruction for Virginia.

DR. R. B. MARSTON, superintendent of schools, Sistersville, W. Va., since 1919, has been appointed superintendent at Morgantown, W. Va., succeeding DR. C. E. McCORKLE, resigned. DOCTOR MARSTON is succeeded at Sistersville by J. V. ROBERTS.

JOHN B. MONTGOMERY, Detroit, who was for twenty-six years superintendent of schools, Coldwater, Mich., died in Florida recently. MR. MONTGOMERY had retired from school work eight years ago.

DR. GEORGE FLOWERS STRADLING, principal, Northeast High School, Philadelphia, for eleven years and a member of the school faculty for more than forty years, died recently. DOCTOR STRADLING, in addition to his educational activities, was widely known as a scientist.



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A Flexible System of Automatic Electric Heat Regulation

A flexible system of automatic heat regulation that is electrically operated has been designed by the Minneapolis-Honeywell Regulator Co., Minneapolis. This flexibility permits the selection of the particular type of regulation to meet the requirements of any individual building.

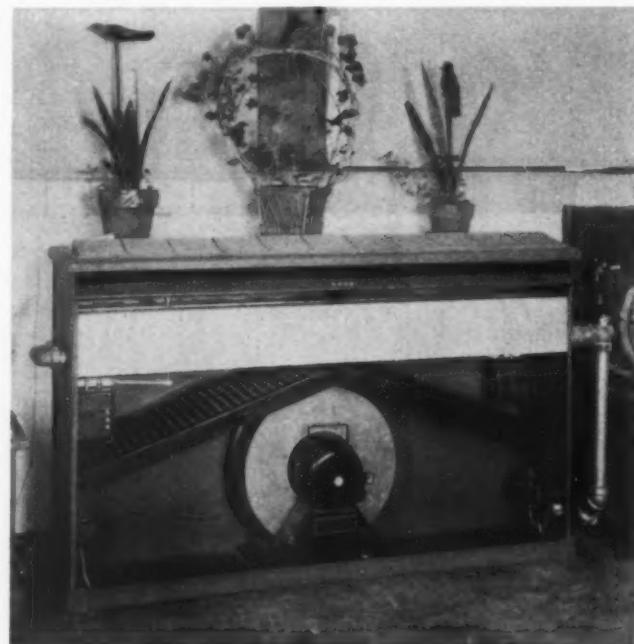
A proper selection of these regulators and controls may be applied to any type of heating, whether a blast, straight or split system is used, and to any type of boiler. A further flexibility within the particular system selected is made possible by the selection of regulators for controlling individual rooms, groups of rooms and sections of the building, and of various boiler controls. The amount and type of equipment used govern the type of regulation obtained. The Modutrol system can meet a great variety of control requirements, and the selection of equipment must be made to meet the heating needs of the individual building.

The savings in operation costs should be commensurate with the amount of control. As an illustration, a simple type of room temperature control without a connection to the boiler is obviously going to save little in fuel consumption, but a room control that is connected with the boiler and that regulates the heat generated will reduce operating costs. A further saving may be accomplished by a sectional or zone control by which a group of rooms having a southern exposure and needing less heat may be cut off at the steam main, while rooms having a northern exposure continue to receive a full supply.

Complex control of this kind is valuable only when extreme accuracy of regulation is possible, and this is obtained only with instruments of great sensitivity. Electrical sensitivity and regulation combine the necessary accuracy to produce a finely balanced and regulated system. Regardless of the fuel saving made possible by this accuracy of regulation, it would be an expensive type of control if the system required a great amount of servicing to maintain this accuracy. Devices that combine simple and rugged construction and few easily

replaceable wearing parts are the solution for electrically operated heat regulation.

An installation economy where electric thermostatic control is used is in the elimination of the special piping and machinery necessary for the pneumatic type of control. Current may be obtained from the line supplying the motor of unit ventilators, or through the regular wiring conduits if they are more conveniently placed. Only



This unit ventilator has the cover removed to show the Modutrol system installed in the kindergarten of Tinley Park School, Tinley, Ill.

a small amount of special conduit is necessary to connect the thermostat with its motor controls.

The essential parts of the Minneapolis-Honeywell Modutrol system are the Modustat for radiator control, the Modutrol motor for mixing or fresh air dampers and various types of thermostats, each designed to perform specific functions under differing conditions and all placed where the heat demand is controlled. The Aquastat, Pressuretrol, Vaporstat and motorized valves are placed at the source of heat generation, to control boiler operation and fuel consumption and to serve as safety limit controls. With all of these available controls, a manually operated heating

Makeshifts are Dangerous

Stage equipment should always be considered from the safety angle. Makeshifts are dangerous, troublesome, and in the end, unreasonably costly.

A void needless expense. Install guaranteed equipment.

Vallen ingenious engineering banishes the fire hazard. Vallen simplicity of design and rugged construction features are positive assurance of 100 per cent safety.

Write for booklet, "Stagecraft for the Non-Professional Drama," helpful, interesting and valuable.

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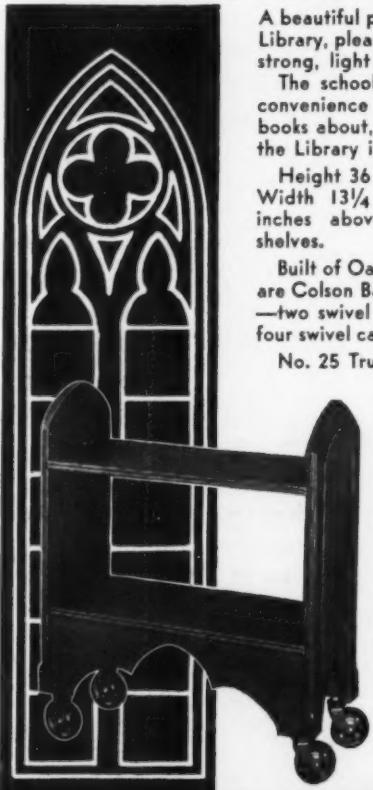
Height 36 inches—Length 30½ inches—Width 13¼ inches. Lower shelf is 13½ inches above floor. 14 inches between shelves.

Built of Oak in light or dark finish. Casters are Colson Ball Bearing 4 inches in diameter—two swivel and two fixed. Furnished with four swivel casters on order.

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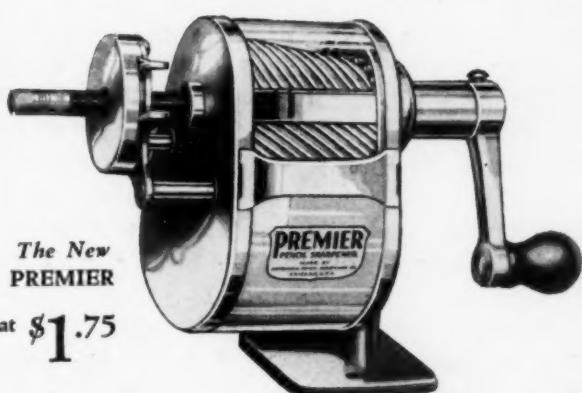
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plant, a partially automatic or a completely automatic heating and ventilating system may be selected.

The Modustat is an automatic orifice radiator valve composed of three units: the thermal unit, the valve body and the adjusting unit. The ther-



The Modustat radiator valve pictured here has a rigid thermal unit extending below the body of the valve.

mal unit is made in two types, one with a rigid extension for exposed radiation and another with a flexible hollow wire for cabinet and concealed radiation. This unit contains the volatile liquid that is sensitive to room temperatures and actuates the valve disk, through the expansion or contraction of a nickel alloy bellows, thus allowing more or less heat to enter the radiator. Should wear occur, the disk takes the deterioration and is readily replaceable. The valve body need not be removed to make this replacement. The valve body is the accepted standard of brass casting. The adjusting unit is made in two styles, either a bakelite hand wheel or a key set type.

The Modustat is designed for use only with a two-pipe (direct or indirect) steam, vapor or vapor vacuum heating system, operated on pressures not to exceed ten pounds and on vacuums not to exceed ten inches. The one-half to three-quarter-inch Modustat controls radiation up to a hundred square feet. Larger sizes are made to be used for larger radiating surfaces. When the Modustat is set at the required position to produce the desired temperature it automatically operates to maintain that temperature within one degree of the predetermined point.

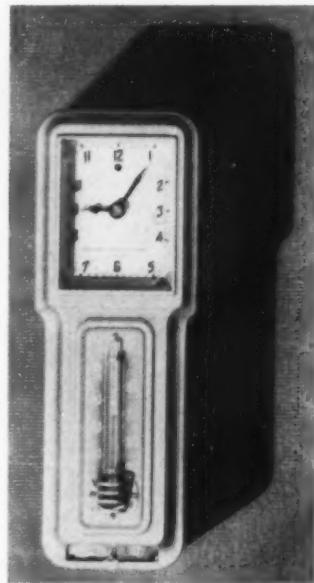
The Modutrol system consists of three parts: the Modutrol thermostat, the Modutrol motor and

a transformer. The room thermostat governs the Modutrol motor, and may be considered as an electrical switch that controls the heating or cooling equipment. This is a bellows actuated, variable resistor, potentiometer type of thermostat that is completely modulating. The Modutrol motor operates the control dampers, louvers and valves used in connection with air conditioning in heating systems. It may be applied to unit heaters, unit ventilators or to a central fan system.

The standard motor is connected to a transformer using 110-volt, 60-cycle alternating current on the primary with a secondary or control circuit of 5 watts at 20 volts, and a motor circuit of 20 watts at 20 volts. Other types of voltages and frequencies of alternating current may be used, but not direct current. The motor is of the modulating type that prevents overruns, and assures accuracy of control. The lever arm connected to the motor is moved up or down to adjust the opening and closing of louvers or dampers.

The Modutrol system as applied to the unit ventilator is not complicated. The modulating motor is governed by the thermostat, and adjusts the mixing dampers to admit more or less fresh air according to whether the room needs to be heated

To control heat loss an electric clock thermostat of the zone control type is placed in the room that has the greatest heat loss in the particular control group.



or cooled. The recirculating damper is controlled by a nonmodulating motor that operates in parallel with the fan circuit, opening the damper as the fan starts and closing it when the fan is turned off. Or a manual switch in the boiler room may be used to keep the damper closed for quick heating. The Modutrol system can be applied to any make of unit ventilator.

The Modustat and Modutrol are the heat regulating elements necessary for room or unit con-

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trol. When a group of rooms (a zone) is to be controlled, a zone type electric clock thermostat and motorized valves are used. The function of the zone thermostat is to ensure a constant supply of steam to the unit ventilators and radiators, to lower and to maintain automatically a predetermined temperature at night and over holiday and week-end shut-offs and to reduce line condensation losses in mild weather.

The school building is usually divided into a number of zones, each zone to be controlled by an electric clock thermostat and a motorized valve that is actuated by the thermostat. The zone thermostat is placed in the room that has the greatest heat loss in its particular control group. The motorized valve connected to this master thermostat is placed in the branch steam supply line as close as possible to the main steam supply line to prevent line condensation. The closure of this valve cuts off the heat supply to its particular zone of control. When this multiple zone control is used in conjunction with a stoker or oil burner, the boiler plant may be automatically shut down when all zones are supplied, and automatically started when heat is required. To hold the fire while there is no heat demand, a Stokerswitch control used with the automatic stoker maintains a minimum of fire in the boiler until there is a demand for more heat. The zone thermostat and Stokerswitch are particularly valuable for fuel saving in mild weather.

Governing Boiler Temperature and Pressure

To achieve the greatest safety and the maximum of economy, limit controls should be used to govern boiler temperature and pressure within a predetermined range. These devices prevent over-runs that may be caused by sudden changes of temperature, making the room thermostats call for a great quantity of heat. The limit control prevents the excessive generation of heat so that when the room thermostat indicates that less radiation is necessary only a normal quantity of heat remains in the boiler. These controls are made for all types of heating systems.

An indication of some of the applications of the Modutrol system has been given. The various control devices make it possible to attain any amount of heat regulation by the proper selection of equipment. As each school has its individual heat regulation requirements, every building must be studied as a unique problem although the general application of heat regulation is the same. A further description of the various regulating devices and how they may be applied to a specific school heating problem may be obtained from the manufacturers.

A Metal Base Blackboard That Is Substantial and Durable

A manufactured blackboard that appears substantial and durable has just been developed by the American Seating Company, Grand Rapids, Mich.

Metalboard, as the name implies, has a metal base of 18-gauge Armco iron on which is fused a porcelain enamel. Both sides of the metal sheets are covered with black porcelain, and one side is etched to give an abrasive finish to the writing surface. The dull finish that is given to the enamel minimizes glare but does not eliminate it entirely. Any kind of chalk, wax or grease crayon, or paint may be used for a marking material. These may be removed by any of the ordinary cleaning compounds, naphtha, benzine, paint or lacquer solvents without injury to the enamel.

The enamel is sufficiently tough and pliable so that it does not flake off or crack when the metal is given a considerable bend, and extremely hard blows of a hammer are necessary to cause any chipping of the surface. The rough treatment necessary to mar the surface is not likely to occur either during the installation of the board or its use in the classroom. Resurfacing should not be required with this blackboard.

Metalboard is supplied in one height only, and in various lengths. The standard sizes of sheets are: $3\frac{1}{2}$ feet high, and 5, 6 or 7 feet long. When longer blackboards are needed they may be made up in multiples of these sections, or may be cut to fit the particular location.

For the installation of Metalboard the usual wood trim is necessary, and grounds are placed on the wall to receive it. The plaster must be brought up flush with the grounds and finished smooth, although only a brown coat need be used. After the trim has been placed and all but the finish coat of varnish applied, a layer of deadening felt is placed over the entire blackboard space. Each section of Metalboard is slightly concave vertically, and has seven metal tabs at either end for jointing.

Because the sheet is concave it must be forced into place and securely anchored with a well nailed finish molding that covers the junction of trim and blackboard. The concave shape of the sheet exerts a continuous pressure on the felt and eliminates any hollow space behind the blackboard. This precludes any noise or resonance.

When it is necessary to use more than one section they are interlocked by the end tabs which make the joint a close fitting and smooth one. If it is necessary to cut a section, this may be done with squaring shears, hack saw tile cutter or cold chisel.